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SUPPLEMENT

TO THE

ANNUAL REPORT

OF THE

State Engineer and Surveyor

OF THE

STATE OF NEW YORK

For the Fiscal Year Ended September 30, 1914

TRANSMITTED TO THE LEGISLATURE JANUARY 13, 1915

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REPORT

ON

HYDRAULIC DATA
1914

DEPARTMENT OF BARGE CANAL,

COMPRISING THE FIFTEENTH ANNUAL REPORT ON STREAM GAGING

G. Edward Gibson,
Assistant Engineer

CONTENTS

PAGE

Report on stream gaging:

- Organization 7
- Scope 8
- Exposition 11
- Accuracy 12
- Definition of terms 14
- Convenient equivalents 15

St. Lawrence river drainage 17
- Lake Champlain drainage basin 19
  - Lake Champlain 20
  - Saranac river 28
  - Ausable river 31
  - Lake George 36

St. Lawrence river drainage below Lake Ontario:

- St. Regis river 44
- Deer river 47
- Raquette river 50
- Oswegatchie river 57

Black river drainage basin:

- Black river 62
- Deer river 69
- Beaver river 72
- Moose river 72

Sandy creek drainage basin:

- Sandy creek 78
- North branch, Sandy creek 83

Salmon river drainage basin:

- Salmon river 89
- Orwell brook 91

Oswego-Oneida-Seneca river drainage basin 93
- Oswego river 98
- Oneida river basin 119
  - Oneida river 120
  - Chittenango creek 127
  - Butternut creek 129
  - Limestone creek 132
  - Oneida creek 137
- Seneca river basin 139
  - Seneca river 139
  - Cayuga lake 144
  - Seneca lake 147
  - Onondaga lake and creek 150
  - Owasco outlet 153
  - Clyde river 156
  - Ganargua creek 158
  - Canandaigua outlet 159
  - Flint creek 162

Genesee river drainage basin:

- Genesee river 166
- Canadice lake 176

Niagara river drainage:

- Niagara river 178
- Tonawanda creek 183
- Little Tonawanda creek 185
- Cattaraugus creek 188

293045

PAGE
Hudson river drainage basin.......... 191
  Lower Hudson river drainage basin:
    Hudson river.......... 193
    Rondout creek.......... 195
    Esopus creek.......... 199
    Kinderhook creek.......... 203
  Upper Hudson river drainage basin:
    Hudson river.......... 208
    Cedar river.......... 231
    Indian river.......... 233
    Indian lake reservoir.......... 236
    Hoosic river.......... 242
    Sacandaga river.......... 248
    Schroon river.......... 255
  Mohawk river drainage basin.......... 262
    Mohawk river.......... 271
    Alplaus kill.......... 289
    Schoharie creek.......... 292
    East Canada creek.......... 300
    West Canada creek.......... 303
    Nine-Mile creek.......... 316
Delaware river drainage basin:
  Delaware river.......... 323
  Neversink river.......... 332
Susquehanna river drainage basin.......... 333
  Susquehanna river.......... 334
  Chenango river.......... 337
  Chemung river.......... 340
Allegheny river drainage basin.......... 342
  Allegheny river.......... 344
Miscellaneous.......... 347

REPORT ON STREAM GAGING FOR 1914

HON. JOHN A. BENSEL, *State Engineer and Surveyor:*

SIR.— I have the honor to submit a report on, and the results of the hydraulic work of the Barge Canal Department, for the calendar year 1914.

This report contains stream gaging data obtained during the year 1914, as follows: Observations of water-surface elevations, records of the discharge of streams and precipitation in the Barge canal zone, collected by this Department; gaging records of streams throughout the state, furnished by the United States Geological Survey in coöperation either with this Department or with the New York State Conservation Commission; stream discharge and precipitation, mainly in the Catskill watersheds, supplied by the Board of Water Supply of the city of New York; United States Weather Bureau records, and other stream gagings furnished by corporations or individuals. Credit for same, where due, is given in connection with the several station records. The aim of this report has been to publish not simply data secured by this Department but to combine all available stream flow data in the state for 1914 in one volume for the convenience of the public. This comprehensive treatment does not apply, however, to rainfall records.

ORGANIZATION

This report is a continuation of the annual reports heretofore made by the Bureau of Hydraulics, which was organized as a specific branch of the Barge Canal Department in 1907. This bureau had charge of the maintenance of the gaging stations and the collection of the stream flow data required in connection with the construction of the Barge canal for purposes of design, operation and defense of claims against the state.

July 5, 1914, Mr. J. P. Newton, Assistant Engineer, chief of the bureau, left the State's service to become Hydraulic Engineer for the Lake Erie and Ohio River Canal Board, the work being carried on by Mr. E. H. Leggett, Jr., Assistant Engineer. In August the Bureau of Hydraulics was abolished as such, responsibility for the gages on each division being placed upon the Division Engineers, the computations, reductions, etc., still being made in the Albany office. In October, 1914, the undersigned was placed in charge of this work in addition to certain other duties.

Stream measurement work for the state of New York is done in two ways: First, actually by the Department of the State Engineer and Surveyor in the Barge canal zone; second, throughout the remainder of the state by the United States Geological Survey under Mr. C. C. Covert, District Engineer, funds for which work were supplied in 1914 as follows: By the Department of the State Engineer and Surveyor, $1,500; New York State Conservation Commission, $10,000; United States Geological Survey, $2,500.

SCOPE

This report contains records from 171 stream gaging stations, at 71 of which discharge is obtained, and of 48 precipitation stations, maintained during 1914 as indicated below:

MAINTAINED BY	Stream stations	Discharge records	Precipitation stations
	No.	*No.*	*No.*
Department of State Engineer	116	21	4
U. S. Geological Survey with Department of State Engineer	11	11	....
U. S. Geological Survey with State Conservation Commission	33	30	....
Board of Water Supply of New York City	4	4	32
U. S. Weather Bureau with Department of State Engineer	....	....	7
Miscellaneous	7	5	5
Totals	171	71	48

It also appeared advisable to include certain records not heretofore published.

There are incorporated in the following paragraphs, with slight modification, portions of the report of Mr. C. C. Covert accompanying the records supplied by the United States Geological Survey, but which apply in general to the other records with the exception of those portions indicating degree of accuracy. The estimates of stream flow for nearly every station maintained by the Geological Survey are based on very complete ratings. It was found necessary during the past year to make new ratings at a number of current-meter discharge stations because of shifting channel conditions. The severe winter conditions that obtained from January to March, 1914, resulted in the formation of heavy ice throughout the entire length of many streams. Consequently, when the ice started to move in the spring, a considerable amount of scouring of the stream bed resulted. In some instances the scouring of the bed above the station was deposited at the control for the gage, thus causing a back water effect. In other cases the trouble started by a scouring out of the control, which had the effect of lowering the gage height without decreasing the discharge of the stream. Sometimes a change in control affects only the low-water portion of a curve; at other times, only the high-water portion. In either case it is always necessary to rerate at least a portion of the curve.

While the twelve recording gages of the Survey have given better records, there have been times at nearly every station when the recording gage has been out of commission, and for this brief period the value of the record has been somewhat impaired. Two stations were equipped with recording gages during the year, one on Chenango river near Chenango Forks, the other on Susquehanna river at Conklin.

The field investigations necessary for developing curves of discharge through the gates of the dam on Indian river near Indian lake and through the turbines of the Indian Rapids power plant on Saranac river near Plattsburg have been completed by the Geological Survey, and as a result of this work monthly estimates of discharge have been computed for Indian lake from July, 1900, to December, 1914, inclusive, and for the Saranac from October, 1908, to December, 1914, inclusive. These tables of monthly discharge are included in this report.

During the period of ice conditions in the state, it is a much more difficult matter to obtain records of stream flow at current-meter stations. The relation between gage height and discharge which obtains during the open period is almost entirely destroyed. It therefore becomes necessary to obtain frequent discharge measurements in addition to the daily gage height and temperature record. Because of this extra field work the funds available make it necessary for the Geological Survey to reduce the number of such stations operated. During the winter of 1913–14, the following stations were maintained by the Survey:

Hudson river at North Creek.
Hudson river at Spier Falls.*
Indian river near Indian Lake.
Schroon river at Riverbank.
Sacandaga river at Hadley.*
Mohawk river at Vischer's Ferry.*
Alplaus kill near Charlton.*
East branch of Delaware river at Fish Eddy.
West branch of Delaware at Hale Eddy.
Susquehanna river at Conklin.
Chenango river near Chenango Forks.
Little Tonawanda creek at Linden.
Genesee river at St. Helena.*
Genesee river at Rochester.*
Owasco outlet near Auburn.*
Black river near Boonville.
Middle branch, Moose river at Old Forge.
Oswegatchie river near Ogdensburg.
Raquette river at Piercefield.*
Saranac river near Plattsburg.
Ausable river at Ausable Forks.

The stations marked with an asterisk are provided with recording gages and continuous records of gage heights were obtained in most cases. In addition to the gage height records, temperature records were received from a number of the stations and special efforts were made to determine the actual backwater effect at each station as a result of the ice formation. The increased care in obtaining the field data at these few stations during the winter undoubtedly makes it possible to provide estimates of flow that are much more reliable than those obtained under former methods. It is therefore considered that records from a few stations fairly representing the various types of drainage basins throughout the state give more reliable and serviceable data than would a larger number of stations from which less accurate results might be obtained.

EXPOSITION

The stations discussed in this report are considered in order upstream. Records for all stations on the main river from its mouth to its source are presented first, and records for its tributaries in regular order, from mouth to source, follow, all records for each tributary drainage basin being given before those of the next basin above.

For each drainage basin there is given a brief general description covering such items as area, source, tributaries, topography, geology, forestation, rainfall, irrigation, storage, power and other interesting or important facts.

Stations are of two classes: Stations where discharge is obtained, and stations where water-surface elevations or gage heights only are obtained.

For each regular discharge station the following data, so far as available or of public utility, are given: Description of station, list of current-meter discharge measurements, table of daily water-surface elevations or gage heights, table of daily discharge, table of monthly and yearly discharge and run-off.

In addition to statements regarding the location and installation of discharge stations, the descriptions aim to give information in regard to any conditions which may affect the constancy of the relation of water-surface to discharge, covering such factors as ice, logging, shifting channels and backwater; also information regarding diversions which decrease the total flow at the measuring section. Statements are also made regarding the accuracy and reliability of the data.

The discharge-measurement table gives the results of the current-meter discharge measurements made during the year, including the date, name of hydrographer, gage height in feet and discharge in second-feet.

The tables of daily water-surface elevations and gage heights record the fluctuations of the stage of the river as found from the mean of the gage readings taken each day. At stations not equipped with recording instruments, the gage is usually read by the observer in the morning and in the evening. The gage height given in the table represents the elevation of the surface of the water above the zero of the gage. All gage heights affected by the presence of ice in the streams or by backwater from obstructions are published as recorded. The rating table is not applicable for such periods unless the proper corrections to the gage heights are known and applied. Attention is called to the fact that the zero of the gage, where gage heights are given, is placed at an arbitrary datum and has no relation to zero flow or the bottom of the river. In general, the zero is located somewhat below the lowest known flow, so that the readings shall not be negative value.

The discharge measurements and gage heights are the base data from which rating tables, daily-discharge tables, and monthly-discharge tables are computed.

The table of daily discharge gives the discharge in second-feet corresponding to the mean of the observed gage heights as determined from the rating tables, together with any additions due to power wheels, gates, leakage, etc.

In the table of monthly discharge the column headed "Maximum" gives the mean flow, as determined from the rating table, for the day when the mean gage height was highest. As the gage height is the assumed mean for the day, it does not indicate correctly the stage when the water surface was at crest height and the corresponding discharge was consequently larger than given in the maximum column. Likewise, in the column headed "Minimum," the quantity given is the mean flow for the day when the mean gage height was lowest. The column headed "Mean" is the average flow in cubic feet for each second during the month. On this the computations for the remaining columns are based.

The base data presented in this report, unless otherwise stated in description of station, have been collected by the methods commonly used and described in standard text books.

ACCURACY

Gages maintained by this Department to determine water-surface elevations are in general read to the nearest tenth foot with only occasional half-tenth foot readings (there are a few gages read in inches) and the hundredths of feet appearing in the tables of water-surface elevations are due to the elevation of the zero of the gage and should not be understood to indicate readings to hundredths of feet. The closeness to which readings are made will be evident upon an inspection of each table. Gage heights supplied by the United States Geological Survey are usually read to hundredths of feet for purposes of discharge computation.

The accuracy of stream-flow data depends primarily on the natural conditions at the gaging station and on the methods and care with which the data are collected. Errors of the first group depend upon the degree of permanency of channel and of permanency of the relation between discharge and stage.

Errors of the second class are due, first, to errors in observation of stage; second, to errors in measurements of flow; and third, to errors due to misinterpretation of stage and flow data.

The accuracy column in the monthly-discharge table does not apply to the maximum or minimum nor to any individual day, but to the monthly mean. It is based on the accuracy of the rating, the probable reliability of the observer and knowlege of local conditions. In this column A indicates that the mean monthly flow is probably accurate within 5 per cent; B, within 10 per cent; C, within 15 per cent; D, within 25 per cent. Special conditions are covered by foot-notes.

Even though the monthly means for any station may represent with a high degree of accuracy the quantity of water flowing past the gage, the figures showing discharge per square mile and depth of run-off in inches may be subject to errors, which result from including in the measured drainage area some noncontributing districts or omitting estimates of water diverted for municipal supplies or other purposes, and they should, therefore, be considered as only approximate, particularly for winter periods or low water. For these errors it is as a rule not feasible to make adequate correction.

The table of monthly discharge is so arranged as to give a general idea of the flow at the station, but should be used only for preliminary estimates. The computations of daily discharge allow more detailed studies of the variation in flow by which the period of deficiency may be determined.

It should be borne in mind that the observations in each succeeding year may be expected to throw new light on data already collected and published, and the engineer who makes use of the figures presented in this report should familiarize himself with the conditions under which they were collected before attempting to draw conclusions for periods other than those covered by the data.

The station records and tabulated results, preceded by a statement defining certain hydraulic terms used and a table of convenient equivalents, are attached hereto.

Respectfully submitted,
G. EDWARD GIBSON,
Assistant Engineer.

HYDRAULIC DATA

DEFINITION OF TERMS

Barge canal datum is sea level (mean tide) at Governor's Island, which has been taken as 14.73 feet below the "Gristmill" bench-mark in Greenbush (now Rensselaer), N. Y. This bench-mark was established by the United States Coast and Geodetic Survey in 1857 and is described as a cross cut in the face of the cellar wall of an old grist-mill at Greenbush, opposite Albany. This structure has been torn down within the last few years and a new building erected, in which the old stone has been reset at an elevation not yet determined by this Department. The elevations given herein, unless otherwise noted, are feet above Barge canal datum, indicated as (B. C. datum), which is the datum used in the construction of the Barge canal by the State of New York.

The volume of water flowing in a stream — the "run-off" or "discharge"— is expressed in various terms, each of which has become associated more or less definitely with a certain class of work. These terms may be divided into two groups — (1) those which represent a rate of flow, as "second-feet," "gallons per minute," "gallons per 24 hours," "miner's inches" and "run-off in second-feet per square mile," and (2) those which represent the actual quantity of water, as "run-off in depth in inches," "million gallons," "cubic feet," and "acre-feet." The units used in this report are "second-feet," "second-feet per square mile," "run-off depth in inches" and "million gallons." They may be defined as follows:

"Second-foot" is an abbreviation for cubic foot per second and represents the rate of discharge of water flowing in a channel one square foot in cross-section at a rate of one foot per second. It is generally adopted as the fundamental unit in the measurement of flowing water and is the "natural" unit, as the foot and second are the units used in making the physical determinations. Other units may be computed from this by the use of factors given in the table of equivalents.

"Second-feet per square mile" is the average number of cubic feet of water flowing per second from each square mile of area drained, on the assumption that the run-off is distributed uniformly both as regards time and area.

"Run-off depth in inches" is the depth to which the drainage area would be covered if all the water flowing from it in a given period were conserved and uniformly distributed over the surface. It is used for comparing run-off with rainfall, which is usually expressed as depth in inches.

CONVENIENT EQUIVALENTS

The following is a list of convenient equivalents for use in hydraulic computations:

Table for converting discharge in second-feet per square mile into run-off in depth in inches over the area

DISCHARGE IN SECOND-FEET PER SQUARE MILE	RUN-OFF IN INCHES				
	1 day	28 days	29 days	30 days	31 days
1	0.03719	1.041	1.079	1.116	1.153
2	.07438	2.083	2.157	2.231	2.306
3	.11157	3.124	3.236	3.347	3.459
4	.14876	4.165	4.314	4.463	4.612
5	.18595	5.207	5.393	5.578	5.764
6	.22314	6.248	6.471	6.694	6.917
7	.26033	7.289	7.550	7.810	8.070
8	.29752	8.331	8.628	8.926	9.223
9	.33471	9.372	9.707	10.041	10.376

NOTE.— For partial month, multiply the values for one day by number of days.

1 second-foot equals 7.48 United States gallons per second; equals 448.8 gallons per minute; equals 646,317 gallons for one day.

1 second-foot for one year covers 1 square mile 1.131 feet or 13.572 inches deep.

1 second-foot for one year equals 31,536,000 cubic feet.

1 second-foot for one day equals 86,400 cubic feet.

1,000,000,000 (1 United States billion) cubic feet equals 11,570 second-feet for 1 day.

1,000,000,00 cubic feet equals 414 second-feet for one 28-day month.

1,000,000,000 cubic feet equals 399 second-feet for one 29-day month.

1,000,000,000 cubic feet equals 386 second-feet for one 30-day month.

1,000,000,000 cubic feet equals 373 second-feet for one 31-day month.

1,000,000 United States gallons per day equals 1.55 second-feet.

100 United States gallons per minute equals 0.223 second-foot.

1 inch deep on 1 square mile equals 2,323,200 cubic feet.

1 inch deep on 1 square mile equals 0.0737 second-foot per year.

1 foot equals 0.3048 meter.

1 mile equals 1.60935 kilometers.

1 mile equals 5,280 feet.

1 acre equals 0.4047 hectare.

1 acre equals 43,560 square feet.

1 acre equals 209 feet square, nearly.

1 square mile equals 2.59 square kilometers.

1 cubic foot equals 0.0283 cubic meter.

1 cubic foot of water weighs 62.5 pounds.

1 cubic meter per minute equals 0.5886 second-foot.

1 horse-power equals 550 foot-pounds per second.

1 horse-power equals 76.0 kilogram-meters per second.

1 horse-power equals 746 watts.

1 horse-power equals 1 second-foot falling 8.80 feet.

1⅓ horse-power equals about 1 kilowatt.

To calculate water power quickly: $\frac{\text{Sec.-ft.} \times \text{fall in feet}}{11} =$ net horse-power on water wheels realizing 80 per cent of theoretical power.

ST. LAWRENCE RIVER DRAINAGE

GENERAL FEATURES

The surface waters of an area of 565,000 square miles in extent pass to the ocean by way of St. Lawrence river. In form this area is an irregular parallelogram extending southwestward for about 900 miles with a fairly uniform breadth of 250 miles. The Great Lakes, into which the river expands, have a water surface of 95,600 square miles, leaving for the land surface drained by the river about 470,000 square miles. More than eight-tenths of this area belongs to Canada. The remainder constitutes a part of the United States. With the exception of about 50,000 square miles (including the whole of the Gaspe Peninsula) in the eastern part of the Province, the Canadian portion lies wholly on the north side of the river. The only part of the United States lying north of the river it at the west end of Lake Superior.

At its mouth the river and its tributaries are drowned, so that the salt water of the ocean enters to form the broad bay of St. Lawrence, with its irregular margin, and even beyond the bay there is indication of a river valley carved in the continental shelf completely covered by the ocean waters. Upstream from the bay of St. Lawrence the water area narrows and the water freshens, though the tide rises nearly as far as Montreal, where the St. Lawrence is a very broad river with gentle current. Just above Montreal the river becomes a series of violent rapids, and from this point upstream it consists of stretches of quiet water separated by rapids. At the outlet of Lake Ontario the river passes through a maze of islands, beyond which is Lake Ontario — the lowest of the five Great Lakes.

The lakes are connected by broad rivers and straits, which in places are navigable, are elsewhere interrupted by rapids and in one place are broken by one of the great falls of the world — Niagara. To the entire area above the mouth of Lake Ontario no large river is tributary. In places the divide runs close to the lakes and is nowhere far from them.

In the northwestern part of the state of New York, between Niagara and St. Lawrence rivers, is an area aggregating 12,400 square miles drained by streams which flow into Lake Ontario.

The divide which controls this drainage is very irregular. Extending to the south and southeast from Fort Niagara, it passes around the headwaters of the Genesee a short distance into Pennsylvania; thence reëntering New York it runs southward and eastward from the interior group of lakes, turns to the north, encircles the sources of Black river, turns again to the west and descends to the lake. The country thus included is level or gently undulating in the counties bordering the lake, but farther south it becomes more rolling and a series of ridges, gradually increasing in height, stretch down between Cayuga and Seneca and their companion lakes, finally becoming merged with the elevated, broken country forming the principal divide whose abrupt slopes reach altitudes of 2,000 to 2,500 feet above the headwaters of the Genesee. The easterly or Black river lobe of the drainage basin receives the run-off from the southwestern slope of the Adirondack mountains — largely a rugged and forest-covered area receiving heavy precipitation, especially in the winter. The principal streams of the area are Genesee, Oswego (formed by the union of Seneca and Oneida rivers, which drain the chain of lakes in central New York), Salmon and Black rivers. A small area in the western part of the state is drained by Lake Erie.

St. Lawrence river receives the flow of a number of New York streams having their sources in a northerly slope of the Adirondacks and fed by the numerous lakes with which the region is dotted. Some of these rivers, as the Grass, Raquette and St. Regis, lie entirely within the United States; others, notably Salmon, Trout, Chateaugay and English rivers, cross the international boundary and flow northward into the St. Lawrence in Canada, as does also Richelieu river, the outlet of Lake Champlain. The following table gives a list of the principal tributaries of the St. Lawrence in the United States, with the areas drained by them determined chiefly from Bien's Atlas of the state of New York.

Drainage Areas of St. Lawrence River Tributaries in the United States

	Square miles		Square miles
Oswegatchie river	1,609	Salmon river [a]	273
Grass river	637	Trout river [b]	129
Raquette river	1,219	Chateaugay river [b]	199
St. Regis river	910	English river [b]	53
Little Salmon river [a]	103	Lake Champlain [c]	7,867

[a] Above junction near international boundary. [b] At New York State line. [c] Above outlet.

The St. Lawrence drains, through Lake Champlain, an area of nearly 4,560 square miles in the state of Vermont. This drainage is practically all from Missisquoi, Lamoille and Winooski rivers and Otter creek. Clyde, Barton, and Black rivers, in northern Vermont, are tributary to St. Lawrence river through Lake Memphremagog and St. Francis river.

LAKE CHAMPLAIN DRAINAGE BASIN

DESCRIPTION OF BASIN

Lake Champlain occupies a long and narrow valley, extending in a north-south direction and forming a part of the boundary between New York and Vermont.

The drainage basin is irregular in form, being about seventy-five miles wide from a point opposite Middlebury, Vt., northward to the outlet of the lake at Rouses Point, on the international boundary. South of Middlebury the average width of the basin is about thirty-five miles and the lake itself is very narrow, forming virtually a drowned river.

The tributary region is rugged and mountainous, mostly covered with forest and with little depth of soil except in the stream valleys. The drainage is received almost entirely through large tributaries, there being little direct coast drainage into the lake. The outlet of the lake is Richelieu river, which flows northward from Rouses Point to St. Lawrence river. The land drainage area above Rouses Point is 7,431 square miles. The water-surface of the lake is 436 square miles, making the total area at the foot of the lake 7,867 square miles.

The fluctuation of the lake surface has an extreme range of nearly ten feet.

*Drainage Areas Tributa yto Lake Champlain**

LOCALITY	AREA IN SQUARE MILES		
	Place to place	Sub-total	Total
Pike river and adjacent area in Canada		[a] 242.00	
Missisquoi river in Canada		[b] 245.00	
Land area in Canada above outlet			487.00
Missisquoi river in Vermont		[b] 615.00	
(Total Missisquoi river, 860 square miles.)			
Lamoille river		[b] 725.00	
Winooski river		[b] 995.00	
Otter creek		[b] 935.00	
Eastern coast drainage		[b] 534.40	
Mettawee, Poultney and Castleton rivers in Vermont		[c] 376.00	
Land area in Vermont, except islands			4,180.40
Wood creek above Smiths Basin	18.60		
Big creek above junction with Wood creek	35.16	53.76	
Wood creek, Smiths Basin to Fort Ann	9.90	63.66	
Halfway creek above Kane's falls	78.82		
Halfway creek, Kane's falls to junction with Wood creek at Fort Ann	6.69	85.51	
Wood creek at Fort Ann, including Halfway creek		149.17	
Wood creek, Fort Ann to junction with Mettawee	55.73	204.90	
Mettawee river in Vermont	151.90		
Mettawee river in New York	55.70		
Total, Mettawee river		207.60	
Total, Wood creek and Mettawee river at junction		412.50	
Wood creek junction, Mettawee river to Whitehall	13.65	426.15	
Wood creek, Whitehall to junction with Poultney river	1.65	427.80	
Castleton river, in Vermont	100.90		
Poultney river, including Castleton river in Vermont		254.80	
Poultney river in New York		11.00	
Poultney river, total to junction with Wood creek		265.80	
Total, Wood creek and Poultney river at junction			693.60
Wood creek, Mettawee and Poultney rivers in New York			286.90
Lake George outlet		220.10	
Bouquet river		[c] 268.10	
Ausable river		[d] 521.30	
Little Ausable river		[d] 75.10	
Saranac river		[d] 629.60	
Little Chazy river		[c] 63.80	
Big Chazy river		[d] 299.40	
Western coast drainage		[d] 344.60	
Land area in New York, except islands			2,708.90
Islands in New York		[e] 55.20	
Total land area above outlet			7,431.50
Water-surface in Canada		[e] 16.50	
Water-surface in United States		[e] 419.10	
Total water-surface		435.60	
Total drainage area above outlet			7,867.10
Richelieu river, Rouses Point to Chambly	[a] 310.00		
Total drainage area above Chambly			8,177.10
Richelieu river, Chambly to mouth	[a] 626.30		
Richelieu river, total		936.30	
Total drainage area above mouth			8,803.40

* Table here presented is a revision of that appearing in the 1907 report.

[a] From maps of Canadian Geological Survey. Scale: 1 inch = 4 miles.

[b] United States post-route maps. Scale: 1 inch = 12.5 miles.

[c] Topographic maps of U. S. G. S. Scale: 1 inch = 1 mile (nearly).

[d] Bien's Atlas of New York. Scale: 1 inch = 2.5 miles.

[e] Charts of U. S. Coast and Geodetic Survey. Scale: 1: 40,000.

LAKE CHAMPLAIN

Records showing the water-surface of Lake Champlain are kept at Fort Montgomery and Burlington by the United States Government and at Whitehall by the State of New York. The Government elevations are referred to mean sea level at Sandy Hook, while the State elevations, Barge canal datum, are referred to mean tide at New York, which is taken as 14.73 feet below the Greenbush bench-mark. The relation between the two sets of elevations in this region is shown by the following determinations of the elevation of the old bench-mark at Whitehall, described as, "U. S. D. W. B. M., on coping of lock No. 23, between ends of anchor, N. W. gate, marked (cross in circle) U. S., with chisel," which is New York State Canal B. M. No. 130 and United States Coast and Geodetic Survey B. M. No. 36.

	Feet
Elevation (New York State Barge canal datum)....	104.375
Elevation (United States Coast and Geodetic Survey datum)	103.565
Difference	0.81

Therefore, to convert elevations in this region given by the United States Coast and Geodetic Survey or by the United States Engineers (War Department), referred to mean sea level, to elevations referred to Barge canal datum, add 0.81 foot. It is to be noted that the similar relation at Albany is 0.87 foot.

RICHELIEU RIVER AT FORT MONTGOMERY, ROUSES POINT

A record of the height of Lake Champlain at Rouses Point, at the head of Richelieu river, the outlet of the lake, has been kept at Fort Montgomery, by the United States Corps of Engineers, beginning in 1875. The station description is as follows:

Location.— About half a mile from the head of Richelieu river, the outlet of Lake Champlain, about one mile northeast of the village of Rouses Point and three-eighths of a mile south of the Canadian boundary; in the fort.

Records available.— 1875 to 1914. Early records are published in the reports of the Deep Waterways Survey.

Drainage area.— 7,867 square miles, including 436 square miles of water-surface.

Gage.— Staff; read once daily. Elevation of gage zero at Fort Montgomery is 92.50 feet above mean sea level (El., 93.31, B. C. datum); high-water level is at elevation 101.6 feet (El., 102.4, B. C. datum); probably lowest elevation recorded at Fort Montgomery is 91.9 feet (El., 92.7, B. C. datum), November 13, 1908.

Coöperation.— Observations of gage heights are made under the direction of the Corps of Engineers of the United States Army and reported weekly to the United States Geological Survey.

Daily Gage Height, in Feet, of Richelieu River at Fort Montgomery, Rouses Point *

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.05	1.20	1.35	3.40	7.00	4.30	2.30	1.35	1.00	0.60	0.55	0.70
2	1.10	1.25	1.40	3.50	7.00	4.10	2.30	1.40	1.20	0.65	0.40	0.65
3	1.00	1.50	1.40	3.80	7.15	4.00	2.20	1.30	1.00	0.30	0.30	0.70
4	0.90	1.35	1.50	4.00	7.10	4.10	2.20	1.30	0.95	0.60	0.60	0.60
5	0.90	1.30	1.60	4.00	7.00	3.80	2.15	1.30	1.10	0.65	0.30	0.50
6	1.00	1.40	1.60	4.10	7.00	3.85	2.10	1.45	1.20	0.40	0.25	0.60
7	0.95	1.50	1.65	4.10	7.00	3.80	2.00	1.40	1.00	0.60	0.40	0.60
8	1.00	1.45	1.70	4.10	6.90	3.70	2.05	1.10	0.70	0.50	0.40	0.60
9	1.00	1.45	1.70	4.40	6.80	3.80	1.90	1.00	0.80	0.50	0.30	0.55
10	1.00	1.40	1.70	4.60	6.80	3.80	2.00	1.20	0.80	0.60	0.35	0.70
11	1.00	1.40	1.65	4.80	6.60	3.50	2.10	1.10	0.85	0.70	0.50	0.80
12	1.05	1.35	1.70	4.90	6.50	3.50	2.10	0.90	0.80	0.40	0.30	0.80
13	1.00	1.45	1.70	5.00	6.40	3.30	1.90	0.85	0.85	0.40	0.40	0.85
14	0.95	1.40	1.70	5.10	6.30	3.25	2.10	1.00	0.85	0.40	0.30	0.80
15	1.00	1.40	1.60	5.00	6.20	3.20	2.00	0.85	0.85	0.60	0.80	0.70
16	1.00	1.50	1.70	5.00	6.10	3.00	2.05	0.80	0.80	0.45	0.40	0.70
17	0.90	1.50	1.70	5.10	6.00	3.00	2.00	0.90	0.75	0.60	0.40	0.75
18	0.95	1.50	1.80	5.20	5.90	3.00	1.90	1.00	0.70	0.50	0.40	0.75
19	1.00	1.45	1.85	5.30	5.80	3.00	1.80	0.95	0.70	0.50	0.80	0.95
20	0.90	1.40	1.90	5.50	5.70	2.80	1.75	1.00	0.80	0.60	1.00	0.60
21	1.00	1.40	2.00	6.10	5.60	2.70	1.50	1.10	0.75	0.70	1.00	0.90
22	1.00	1.45	2.10	6.50	5.45	2.70	1.50	1.00	0.80	0.60	0.90	0.70
23	1.00	1.40	2.00	6.50	5.30	2.70	1.55	1.10	0.70	0.70	0.55	0.70
24	1.00	1.40	2.00	6.80	5.20	2.60	1.40	0.80	0.65	0.20	0.60	0.60
25	0.95	1.45	2.00	6.80	5.30	2.50	1.50	0.75	0.70	0.60	0.60	0.60
26	1.00	1.45	2.05	7.00	5.20	2.50	1.40	0.80	0.60	0.65	0.75	0.60
27	1.05	1.40	2.20	6.80	4.90	2.20	1.40	0.80	0.40	0.35	0.40	0.80
28	1.00	1.45	2.45	6.90	4.60	2.40	1.30	0.75	0.50	0.55	0.50	0.60
29	1.10	......	2.70	6.80	4.70	2.50	1.10	0.80	0.60	0.40	0.80	0.60
30	1.10	......	3.00	6.90	4.80	2.35	1.30	0.80	0.40	0.40	0.70	0.60
31	1.10	......	3.20	......	4.50	......	1.40	0.90	......	0.35	......	0.60

* Indicates surface of Lake Champlain. To reduce to Barge canal elevation, add 93.31.

LAKE CHAMPLAIN AT BURLINGTON, VERMONT

Location.— On the south side of the roadway leading to the dock of the Champlain Transportation Co., at the foot of King St., Burlington, Vt.

Records available.—May, 1907, to December 31, 1914.

Gage.— Staff; read once daily. Comparisons of gage readings indicate that the zero of the gage at Burlington is at practically the same elevation as that of the gage at Fort Montgomery, namely, 92.50 feet above mean sea level (El., 93.31, B. C. datum).

Coöperation.— Gage heights furnished through the courtesy of Mr. D. A. Loomis, general manager of the Champlain Transportation Co. to the United States Geological Survey.

To convert gage heights in accompanying tables to elevations referred to Barge canal datum, add 93.3 feet.

Daily Gage Height, in Feet, of Lake Champlain at Burlington, Vt.

1907	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1					5.50	4.16		2.15	1.00	1.30	2.65	
2					5.63					1.40	2.60	2.90
3						4.00		2.10	1.00			2.80
4					5.70	3.93	2.90			1.47	2.80	2.75
5						3.80	2.90	2.10	1.25	1.47		2.90
6					5.95		2.85	2.05	1.30		2.95	2.80
7					5.95	3.71		2.00	1.40	1.50	3.10	2.75
8					5.95	3.65	2.82	2.00			3.30	
9					5.92		2.80	1.90	1.44		3.50	2.85
10						3.52			1.44	1.90		2.80
11					5.85	3.50	2.80		1.42	1.90	3.60	3.25
12						3.42	2.76	1.80		2.00	3.65	3.70
13					5.62	3.32	2.70	1.75	1.50		3.60	
14					5.62	3.20		1.75	1.60	2.17	3.64	
15					5.45	3.20	2.65	1.75		2.18	3.55	
16					5.38		2.60	1.65	1.60	2.20	3.50	
17					5.37		2.55	1.55	1.50	2.20	3.35	
18					5.30	3.00	2.55		1.50	2.20	3.40	
19							2.50	1.50	1.50		3.40	
20					5.10		2.45	1.45	1.50		3.20	3.75
21								1.40	1.40		3.20	
22					5.00	2.90	2.45	1.40			3.20	3.70
23					4.90		2.40	1.35	1.35	2.10	3.20	3.70
24					4.82	2.85	2.40	1.30	1.30	2.08		
25					4.72		2.35		1.35	2.00	3.18	
26							2.35	1.25	1.30	2.00	3.15	
27					4.50		2.30	1.20	1.30		3.15	
28						2.85		1.20	1.29		3.13	4.00
29					4.40	2.90	2.25	1.15		2.20	3.10	
30					4.30	2.90	2.20	1.10	1.30	2.50	3.05	4.25
31					4.23		2.18	1.10		2.65		4.40

Daily Gage Height, in Feet, of Lake Champlain at Burlington, Vt.

1908	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1				*a*5.95	6.00	5.10	2.95	1.70	0.98			
2	4.50		*b*4.45	5.85	6.15	5.10	2.90		0.98	0.25		
3	4.50			5.95		5.00	2.80	1.65	0.98			−0.10
4	4.50			5.95	6.35	4.90		1.60	0.98			−0.25
5	4.30				6.30	4.85		1.50				−0.18
6	4.30			5.80	6.30	4.75	2.60	1.50				
7	4.30			5.78	6.30		2.60	1.50				
8	4.30			5.80	6.30	4.50	2.55	1.40				
9	4.30				6.40	4.45	2.50			0.12		
10	4.30			5.85		4.35		1.40				
11	4.30			5.90	6.45	4.30	2.30	1.40			−0.18	
12			*a*4.20			4.30		1.35		0.12		
13	4.30			6.00	6.50	4.05	2.20	1.30				
14	4.20	*a*3.50	*a*3.75	6.00			2.20	1.25		0.05		
15	4.15			6.00	6.45	4.00	2.10	1.20		0.05		
16	4.10	*c*		5.90		3.90	2.00					
17	4.10	4.22		5.80		3.90	2.00	1.20			−0.18	
18	4.05	4.40		5.80		3.90	2.00	1.20				−0.05
19			*a*4.50			3.90	2.00	1.20				
20	3.95			5.70		3.85	2.00	1.20		0.075	−0.18	
21			4.45	5.70	6.00		2.00	1.20				
22	4.00	4.55		5.70		3.60	1.95	1.20				
23	3.95		*a*4.40			3.55	1.90				−0.21	
24			*a*4.40			3.50	1.90	1.10				
25			*a*4.60	5.45	5.65	3.40	1.90	1.10				
26			*a*4.60			3.30		1.05				
27		*a*4.50	*a*4.80	5.60	5.50	3.25	1.85	1.00				
28			*a*5.02	5.70	5.40		1.80	0.99	0.27		−0.15	
29				5.90	5.30		1.80	0.99				−0.08
30			*a*5.75	6.00		3.00	1.80	0.98				
31			*a*5.85				1.75	0.98				

a No ice. *b* Top of ice. *c* Heavy rain; snow gone; ice out of Winooski river.
NOTE.— The lake was frozen at the gage the greater part of the time, Jan. 24 to Mar. 31.

Daily Gage Height, in Feet, of Lake Champlain at Burlington, Vt.

1909	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1			3.48		6.95	6.00			1.00	0.75	0.40	
2				*a*4.10		5.92	3.40	1.85	1.00	0.75	0.40	
3		1.33			6.90	5.78	3.35	1.80	1.00		0.42	0.50
4					6.90	5.65		1.78	1.00		0.42	
5	—0.05			*a*4.45	6.80		3.25	1.70		0.80	0.42	
6							3.15	1.65	0.90	0.80	0.42	
7					6.70	5.45	3.10	1.60	0.88	0.80		
8	0.25	*b*1.67	3.60	5.37	6.70	5.40			0.85	0.80	0.35	
9				5.80		5.35	3.00	1.52	0.83	0.80	0.35	
10					6.70	5.20	2.90	1.50	0.80		0.30	
11	0.33	1.90			7.00	5.10		1.49	0.80	0.75	0.30	
12				*c*5.95	7.17	5.00	2.75	1.45		0.75	0.38	
13					7.18		2.65	1.40	0.75	0.70	0.40	
14					7.10	4.80	2.65	1.35	0.72	0.70		0.75
15		2.06	3.55	6.55	7.08	4.72	2.60			0.65		
16				6.95			2.60	1.33	0.80	0.60	0.40	
17				7.05	7.00		2.60	1.30	0.75			
18					7.08		2.50	1.30	0.70	0.60	0.45	
19		2.30		7.35	7.08		2.45	1.30				
20	0.50			7.56	7.04		2.40	1.30	0.60	0.55	0.25	
21				7.61	6.95	4.30	2.37	1.30	0.58	0.50		
22		2.66	3.30	7.50	6.90	4.25	2.30		0.51	0.50		
23	0.53			7.54		4.20	2.25	1.20	0.50	0.52		
24		2.90		7.52	6.68			1.15	0.60			
25	0.70	3.06			6.65			1.12	0.59	0.50		
26	0.93	3.02		7.41	6.45	3.95	2.10	1.10		0.45		
27	1.03	3.36		7.31	6.30		2.05	1.10		0.45		0.73
28	1.17			7.13	6.20		2.00	1.10	0.70	0.45		
29	1.20		3.67	7.13	6.15		1.98		0.70			
30	1.25						1.95	1.10	0.80	0.42		
31							1.90	1.05				

a Gage height to top of ice. *b* Lake closed; no open water in sight. *c* Lake apparently open; no ice in sight.

NOTE.— Lake frozen from January 29 to April 8. Thickest ice, 13.5 inches, March 8.

Daily Gage Height, in Feet, of Lake Champlain at Burlington, Vt.

1910	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1				5.40		3.80	3.15	1.90	1.40	1.00	1.20	1.35
2		*a*1.80	2.55	5.45		3.80	3.10	1.85			1.20	1.35
3			2.97		4.30	3.70		1.80		1.00	1.20	1.37
4				5.45	4.40	3.65		1.80		1.00		
5				5.40	4.50		2.95	1.80	1.33	1.00	1.25	1.37
6				5.30	4.50	3.60	2.90	1.80	1.30	1.00		1.35
7				5.38	4.50	3.60	2.85	1.80	1.25	1.05		1.85
8		*a*1.80		5.40		3.78	2.80	1.80	1.30	1.10	1.40	1.33
9			4.53	5.40	4.50	3.85	2.70				1.40	1.30
10			4.63		4.40	3.90		1.75	1.40	1.15	1.47	
11				5.38	4.00	3.90	2.65	1.75	1.40	1.15	1.40	
12			4.70	5.35	4.35		2.60	1.70	1.40	1.15	1.45	
13				5.30	4.30	3.85	2.50	1.70	1.35	1.17		
14	*a*0.71	1.80	4.78	5.20	4.28	3.85	2.45		1.33	1.17	1.45	
15			4.80	5.10		3.80	2.40	1.70	1.30	1.20	1.45	
16			4.75	5.05	4.05	3.75	2.40	1.70	1.30	1.20	1.45	
17			4.70		4.00	3.75		1.70	1.30	1.15	1.45	
18			4.70	4.85	3.90	3.70	2.40	1.65		1.15	1.45	
19	*a*0.70		4.55	4.85	3.85		2.35	1.65	1.25	1.10	1.43	
20				4.85	3.85	3.65	2.30	1.65	1.25	1.10		
21		1.90	4.60	4.80	3.80	3.60	2.25		1.20	1.10	1.40	
22			4.68	4.75		3.55		1.65	1.20	1.10	1.40	
23			4.65	4.70	3.75	3.50	2.15	1.60			1.40	
24	1.15		4.65		3.75	3.45		1.60	1.10	1.10	1.35	
25	1.40		4.75	4.60	3.60	3.40	2.10	1.60		1.10	1.35	
26			4.95	4.52	3.70		2.00	1.35	1.05		1.35	
27				4.45	3.75	3.40	1.95	1.35		1.15		1.25
28	1.60	2.00	5.15	4.45	3.75	3.40	1.95		1.05		1.35	
29			5.20	4.40			1.95	1.35	1.05	1.20	1.35	
30			5.30			3.15	1.95	1.40	1.05		1.35	
31			5.25		3.80			1.40		1.20	1.35	

a Surface of ice.

Daily Gage Height, in Feet, of Lake Champlain at Burlington, Vt.

1911	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	6.00	3.75	2.15	......	0.60	......	1.10	1.50
2	......	......	......	......	6.05	3.65	......	1.10	0.60	......	1.10	1.50
3	1.50	......	......	2.94	6.25	3.55	2.10	1.10	......	......	1.10	......
4	......	......	......	2.97	6.23	......	......	1.10	0.60	......	1.00	1.50
5	......	......	......	......	6.15	3.48	......	1.10	0.60	......	1.05	1.50
6	......	......	......	3.05	6.10	3.40	2.00	......	0.60	......	1.10	1.50
7	......	......	......	3.38	5.95	3.30	1.95	1.05	0.60	0.65	1.10	1.55
8	......	......	......	3.82	......	3.25	......	......	......	......	1.10	1.55
9	2.00	......	......	......	5.85	3.15	1.80	0.85	......	0.65	1.10	1.50
10	......	......	......	4.48	5.80	3.12	......	0.85	......	0.65	1.10	......
11	......	......	......	4.64	5.70	......	1.80	0.85	......	0.68	1.05	1.55
12	......	......	*a*2.10	4.75	5.55	3.05	1.70	0.85	0.65	0.68	......	1.60
13	......	......	*a*2.20	4.90	5.40	3.00	1.65	......	......	0.70	1.10	1.70
14	......	......	*a*2.10	5.05	5.25	2.95	1.60	0.80	0.55	0.70	1.10	1.90
15	......	......	*a*2.10	5.33	......	2.90	1.58	0.80	......	......	1.10	2.10
16	......	......	1.70	......	5.12	......	......	0.80	0.52	0.65	1.10	2.20
17	2.20	......	1.70	5.82	5.05	......	1.55	0.78	......	0.65	1.15	......
18	......	......	......	5.90	4.95	......	1.51	0.78	0.56	0.65	1.20	2.30
19	......	......	......	5.92	4.85	......	1.45	0.78	0.60	0.75	......	2.30
20	......	......	......	5.93	4.80	2.75	......	......	0.60	0.85	1.22	2.30
21	......	......	1.80	5.94	......	2.68	1.40	0.70	0.58	0.90	1.28	2.30
22	......	......	......	5.95	4.55	2.60	1.40	0.70	......	......	1.30	2.30
23	......	......	......	......	......	2.55	......	0.70	......	1.00	1.30	2.45
24	......	2.10	......	5.90	4.40	2.50	1.30	0.65	......	1.05	1.30	......
25	......	......	......	5.90	4.30	......	1.25	0.64	......	1.05	1.30	2.50
26	......	......	......	5.89	4.20	2.40	1.20	......	0.60	1.10	......	2.70
27	......	......	1.90	5.90	4.10	2.35	1.20	0.60	......	1.10	1.30	2.90
28	......	......	2.15	5.95	......	2.30	1.20	0.52	0.57	1.10	1.35	2.90
29	......	......	2.40	5.95	4.00	2.25	1.15	0.60	......	......	1.40	2.90
30	......	......	......	......	3.90	2.20	......	0.60	0.52	1.10	1.40	2.80
31	......	......	2.80	......	3.80	......	1.15	0.60	......	1.15	......	......

a To top of ice.

NOTE.— The lake was frozen at the gage during January, March and April. The thickest ice recorded was 18.5 inches, March 13 and 20.

Daily Gage Height, in Feet, of Lake Champlain at Burlington, Vt.

1912	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	2.30	......	3.50	7.20	6.08	3.80	2.05	......	1.90	2.38	2.90
2	2.80	2.30	1.72	3.78	6.89	......	3.70	2.00	1.50	1.90	2.35	2.90
3	2.80	2.30	......	3.90	6.80	6.40	3.60	2.00	1.48	1.88	......	2.90
4	2.80	......	......	3.90	6.70	6.40	3.60	......	1.48	1.88	2.35	2.90
5	2.70	2.30	1.72	3.98	......	6.40	3.50	2.00	1.45	1.88	2.40	2.90
6	2.65	......	......	4.25	6.60	6.30	3.50	1.95	1.45	......	2.40	3.00
7	......	......	......	......	6.40	6.20	......	1.90	1.43	1.85	2.40	3.03
8	2.57	......	......	5.39	6.20	6.10	3.30	1.90	......	1.85	2.70	......
9	2.55	......	1.74	6.00	6.10	......	3.20	1.90	1.43	1.80	3.00	3.05
10	2.40	2.10	......	6.29	6.00	6.00	......	1.85	1.40	1.80	......	3.00
11	2.40	......	......	6.38	5.93	5.90	......	......	1.40	1.78	3.20	2.97
12	2.30	......	1.74	6.41	......	5.83	3.00	1.85	1.40	1.75	3.22	2.98
13	2.28	......	......	6.49	5.70	5.75	2.90	1.85	1.38	......	3.30	2.95
14	......	2.10	......	......	5.60	5.66	......	1.80	1.38	1.75	3.35	2.95
15	2.15	......	......	6.45	5.50	5.50	2.75	1.80	......	1.70	3.40	2.93
16	2.15	......	1.78	6.65	5.50	......	2.60	1.75	1.40	1.70	3.50	2.90
17	2.18	2.00	......	6.87	5.50	5.40	2.55	1.75	1.45	1.70	3.50	2.90
18	2.18	1.90	1.88	7.05	5.50	5.20	2.50	......	1.50	1.70	3.48	2.90
19	2.18	......	2.05	7.20	......	5.00	2.48	1.75	1.60	1.70	3.45	2.90
20	2.18	1.70	2.20	7.32	5.50	4.90	2.48	1.72	1.60	......	3.40	2.90
21	......	......	2.28	......	5.50	4.82	......	1.70	1.65	1.70	3.40	2.90
22	2.25	......	2.48	7.25	5.65	4.70	2.50	1.70	......	1.70	3.40	......
23	2.47	1.72	2.58	7.33	5.65	......	2.50	1.70	1.80	1.80	3.40	2.95
24	2.60	......	......	7.35	5.63	4.60	2.40	1.65	1.88	1.85	3.60	2.98
25	2.60	......	2.65	7.42	5.60	4.50	2.30	1.62	1.90	1.92	3.58	2.98
26	2.60	1.72	2.68	7.48	5.60	4.50	2.30	1.56	1.90	2.28	3.42	2.95
27	2.60	......	2.68	7.55	......	4.20	2.20	1.63	1.88	......	3.40	2.93
28	......	......	2.70	......	......	4.10	......	1.50	1.88	2.50	3.20	2.93
29	2.60	1.72	2.82	7.55	......	4.00	2.20	1.50	......	2.45	3.10	......
30	2.60	......	3.00	7.30	5.90	......	2.10	1.50	1.90	2.42	3.00	2.90
31	2.60	......	......	......	5.95	......	2.05	1.50	......	2.40	......	2.90

NOTE.— Lake frozen completely over, January 26. Thickest ice noted, 14 inches. Ice was 5. inches thick, April 10.

Daily Gage Height, in Feet, of Lake Champlain at Burlington, Vt.

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1		4.35		7.80	5.62		2.52	1.48	0.83	0.50	0.80	1.05
2	3.00			7.85	5.59	3.87	2.43	1.48	0.72	0.50		1.05
3	3.10	4.28		7.90	5.55	3.82	2.40		0.70	0.55	0.80	1.08
4	3.12	4.20		8.00		3.82	2.38	1.43	0.70		0.80	1.10
5				8.10	5.35	3.80	2.38	1.40	0.68	0.60	0.78	1.10
6	3.25				5.25	3.80		1.38	0.65	0.63	0.78	1.15
7	3.25	4.00		8.20	5.08	3.80	2.35	1.28		0.65	0.80	
8	3.20	3.95		8.10	4.98		2.32	1.28	0.65	0.65	0.80	1.15
9	3.20			8.05	4.85	3.78	2.32	1.23	0.60	0.65		1.18
10	3.20	3.90		7.90	4.72	3.65	2.28		0.60	0.63	0.80	1.20
11	3.20			7.70		3.58	2.25	1.23	0.58	0.62	0.82	1.20
12				7.65	4.54	3.54	2.22	1.20	0.55		0.82	1.20
13	3.33				4.48	3.52		1.20	0.50	0.60	0.85	1.20
14	3.40			7.52	4.43	3.47	2.20	1.18		0.60	0.85	
15	3.40		3.50	7.40	4.38		2.10	1.15	0.50	0.60	0.85	1.20
16	3.42			7.20	4.26	3.39	2.07	1.11	0.50	0.62		1.20
17	3.50		4.10	7.20	4.20	3.18	2.04		0.50	0.62	0.87	1.22
18	3.60		4.15	7.13		3.10	1.98	1.09	0.50	0.63	0.87	1.22
19			4.25	7.00	4.00	3.02	1.90	1.28	0.50		0.90	1.25
20	4.10		4.40		3.88	2.95		1.23	0.50	0.65	0.90	1.25
21	4.25		4.45	6.80	3.88	2.90	1.82	1.22		0.65	0.92	
22	4.35		4.63	6.70	3.83		1.80	1.18	0.50	0.65	0.92	1.25
23	4.40			6.52	3.78	2.86	1.70	1.10	0.50	0.65		1.28
24	4.60		4.85	6.48	3.75	2.75	1.70		0.50	0.65	0.92	1.30
25			5.15	6.38		2.75	1.65	1.08	0.50	0.65		
26			5.65	6.28	3.72	2.75	1.62	1.05	0.50		0.95	1.30
27			6.48		3.72	2.75		1.00	0.50	0.70	0.95	1.30
28			7.20	6.05	3.75	2.68	1.60	1.00		0.75	0.98	
29	4.60		7.56	5.95	3.85		1.54	0.98	0.50	0.80	1.00	1.32
30	4.50			5.78		2.56	1.54	0.90	0.50	0.80		1.32
31	4.40		7.64		3.90		1.52			0.80		1.32

NOTE.— The lake was frozen during portions of February and March. The thickest ice recorded was 15.5 inches on March 18.

Daily Gage Height, in Feet, of Lake Champlain at Burlington, Vt.

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1				3.52	7.50	4.50	2.52	1.55	1.03	0.82		0.85
2	1.32	1.17		3.80	7.45	4.38	2.50		1.05	0.82	0.57	0.87
3	1.32	1.17		4.00		4.29	2.50	1.48	1.05	0.82	0.57	0.88
4		1.15		4.12	7.30	4.22		1.48	1.08		0.56	0.90
5	1.28	1.15	1.65		7.28	4.16	2.43	1.47	1.10	0.80	0.56	0.90
6	1.28	1.10		4.21	7.24	4.02	2.43	1.43		0.80	0.56	
7	1.25	1.05		4.26	7.18		2.38	1.42	1.10	0.79	0.56	1.00
8	1.25			4.34	7.12	3.90	2.38	1.42	1.08	0.79	0.55	1.00
9	1.25		1.80	4.55	7.05	3.78	2.32		1.06	0.76	0.55	1.02
10	1.22			4.90		3.65	2.30	1.37	1.06	0.75	0.54	1.02
11				4.99	6.95	3.60	2.30	1.36	1.04		0.54	1.04
12	1.22				6.88	3.55		1.36	1.03	0.70	0.53	1.04
13	1.20			5.13	6.78	3.48	2.24	1.33		0.67	0.53	
14	1.20			5.18	6.60		2.22	1.32	1.00	0.67	0.52	1.08
15	1.20			5.20	6.55	3.30	2.18	1.32	1.00	0.65		1.10
16			1.68	5.24	6.50	3.22	2.16		1.00	0.65	0.50	1.10
17	1.20		1.80	5.32		3.15	2.16	1.29	0.95	0.63	0.50	1.08
18				5.38	6.30	3.03	2.16	1.25	0.95		0.50	1.05
19	1.19				6.08	2.90		1.21	0.90	0.68	0.55	1.04
20	1.19		2.10	5.74	5.82	2.78	2.13	1.17		0.70	0.57	
21	1.18			6.35	5.72		2.13	1.16	0.87	0.70	0.63	1.02
22	1.18			6.73	5.60	2.68	2.12	1.12	0.87	0.72		1.00
23	1.18			6.98	5.50	2.65	2.12		0.87	0.72	0.70	1.00
24	1.18		2.17	6.98		2.62	1.94	1.08	0.85	0.72	0.78	0.97
25				6.95	5.25	2.58		1.05	0.85		0.78	
26	1.17		2.22		5.16	2.55	1.72	1.03	0.85	0.67	0.78	0.94
27	1.17		2.30	7.05	5.08	2.55	1.61	1.00		0.66	0.78	
28	1.17		2.60	7.10	4.90		1.60	1.00	0.83	0.64	0.83	0.89
29	1.17			7.20	4.75	2.55	1.59	1.00	0.82	0.60		0.88
30	1.18		3.12	7.35	4.60	2.52			0.82	0.58	0.85	0.87
31	1.18		3.40					1.03				0.87

NOTE.— The lake was frozen completely over, February 13. The thickest ice recorded was 14 nches, March 16 and 23. No information as to date on which lake opened. Ice was 4½ inches thick, April 6.

LAKE CHAMPLAIN (WOOD CREEK BELOW DAM) AT WHITEHALL

A gage has been maintained by this Department in the mouth of Wood creek below the dam at Whitehall since January 22, 1905. This gage gives a record of the fluctuation in level of water in this arm of Lake Champlain which, however, is considerably affected by Wood creek discharges.

The original gage was attached to the face of the Champlain Silk Mill on the right-hand side of the stream below the dam. A new gage, attached to the face of the docking below the new lock on the left-hand side of the stream, is now used.

Daily Elevation of Water-surface (B. C. Datum) of Lake Champlain (Wood Creek below Dam) a Whitehall

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	94.65	95.30	94.85	98.95	101.50	98.40	96.05	95.10	94.50	94.50	93.45	94.25
2......	94.70	95.10	95.10	99.95	101.15	98.30	96.15	95.00	94.35	94.35	93.90	94.30
3......	94.70	95.15	95.65	99.20	100.85	98.05	96.05	95.35	94.40	94.25	94.10	94.50
4......	94.75	95.30	95.55	98.65	100.90	97.95	96.00	95.25	94.40	94.20	93.75	94.95
5......	94.80	95.25	95.55	98.50	100.85	98.25	95.90	95.05	94.25	94.20	93.90	95.05
6......	94.70	95.15	95.40	98.40	101.20	97.85	95.90	94.95	94.25	94.80	94.20	94.80
7......	94.70	95.00	95.50	98.35	100.85	97.45	95.90	94.80	94.30	94.05	93.80	94.75
8......	94.70	95.05	95.40	98.70	100.85	97.65	95.65	94.85	94.50	94.00	93.90	94.75
9......	94.70	95.10	95.40	101.65	100.90	96.85	95.90	94.80	94.50	93.85	94.15	94.25
10......	94.80	95.00	95.30	99.70	100.20	97.20	95.80	94.70	94.50	93.90	94.20	94.40
11......	94.90	94.85	95.40	99.00	100.70	97.40	95.95	94.75	94.55	93.80	93.70	94.35
12......	94.70	94.80	93.50	98.95	100.45	97.45	96.00	94.90	94.60	94.20	94.15	94.35
13......	94.60	94.70	95.30	99.15	100.20	97.15	96.00	94.75	94.45	94.40	93.95	94.35
14......	94.50	94.70	95.35	99.00	100.00	97.00	95.60	94.65	94.35	94.10	94.00	94.30
15......	94.35	94.60	95.30	99.20	99.95	97.25	95.50	94.70	94.30	93.95	93.95	94.05
16......	94.35	94.60	95.25	99.25	100.00	97.15	95.40	94.60	94.30	94.45	93.95	94.25
17......	94.40	94.60	95.55	99.25	99.70	96.85	95.30	94.50	94.35	94.05	93.75	94.25
18......	94.50	94.55	95.95	99.05	99.55	96.40	95.50	94.45	94.45	94.35	93.95	94.35
19......	94.30	94.50	95.65	99.10	99.45	95.95	95.35	94.40	94.55	94.30	94.05	94.25
20......	94.55	94.55	95.75	100.10	99.40	96.65	95.40	94.50	94.30	94.20	94.90	94.40
21......	94.40	94.50	95.65	100.95	99.25	96.55	95.30	94.40	94.40	93.85	93.80	94.35
22......	94.45	94.45	95.60	100.65	99.15	96.40	95.20	94.35	94.20	94.55	93.65	94.30
23......	94.40	94.40	95.50	100.80	99.30	96.30	95.20	94.30	94.35	94.00	94.15	94.35
24......	94.55	94.40	95.55	100.65	98.90	96.30	95.30	94.40	94.40	94.15	94.00	94.30
25......	94.65	94.45	95.65	100.45	98.75	96.40	95.30	94.45	94.45	93.95	94.00	94.25
26......	94.45	94.50	95.80	100.30	98.65	96.40	95.40	94.50	94.75	93.80	94.15	94.20
27......	94.45	94.65	98.05	100.65	98.60	96.55	95.40	94.50	94.85	94.45	94.45	94.15
28......	94.50	94.70	100.60	100.45	98.95	96.35	95.40	94.50	94.90	93.85	94.25	94.10
29......	94.60	......	100.05	101.10	98.55	96.10	95.45	94.55	94.40	93.90	94.05	94.15
30......	94.60	......	99.25	101.45	98.45	96.25	95.15	94.65	94.30	94.05	94.20	94.30
31......	94.95	......	98.95	......	98.25	......	95.10	94.55	......	94.10	......	94.20

SARANAC RIVER

DESCRIPTION

Saranac river rises in southeastern Franklin county and flows northeastward to a point near Cadyville and thence eastward into Lake Champlain at Plattsburg. The southern boundary of the basin is the Ampersand mountain range and the stream drains the north slope of the most elevated region of the state of New York. About 16.2 per cent of the upper drainage area is water-surface. The areas tributary to the river are shown in the following table:

Drainage Areas of Saranac River *

LOCATION	Area	Total area
	Square miles	*Square miles*
Above Saranac lake State dam	....	157.50
Above Saranac lake village	44.90	202.40
Above Franklin Falls	104.30	306.70
North branch, Saranac river	136.60	136.60
At junction, North branch	....	498.80
Above High Falls	19.60	518.40
Above Cadyville	74.60	593.00
Above Kent Falls	2.90	595.90
Above Morrisonville	2.00	597.90
Above Lozier dam	26.10	624.00
Above mouth	5.60	629.60

* From Bien's Atlas of New York.

The results of gagings of Saranac river at a station formerly maintained at Saranac lake are given in the report of the State Engineer and Surveyor for 1903, supplement, pages 71–74.

In 1854 a timber dam was built below lower Saranac lake for the purpose of flooding logs. In 1899–1901 a masonry dam and lock were erected by the State at this point.

SARANAC RIVER NEAR PLATTSBURG

Location.—At the Indian rapids power plant (formerly known as Lozier dam) of the Plattsburg Gas & Electric Co., about 6 miles above the mouth of the river at Plattsburg, N. Y.

Records available.— March 27, 1903, to December 31, 1914.

Drainage area.— 607 square miles. (From U. S. Geological Survey, topographic sheets.)

Gages.— The crest gage is a vertical staff in the angle of the wing wall at the end of the intake racks. Datum changed 0.76 foot (higher) August 20, 1906. The tail race gage is a vertical staff spiked to timber crib dike between tail race and river about 50 feet below power house. Datum has changed slightly by settling of crib work. An inclined staff gage at the cable station has been used to determine a discharge rating at that point. Records of kilowatt output are obtained from readings of watt meter on switch board at half-hour intervals.

Discharge measurements.— Made from cable at head of Indian rapids one-fourth mile below the dam; low-water measurements made by wading under cable or in tail race.

Discharge ratings.— The records include the flow over a concrete spillway 171.25 feet in crest length, a rating for which has been prepared by the use of coefficients derived from experiments made in the hydraulic laboratory of Cornell University on a model section of the dam;[1] the discharge through two power units equipped with 300 kilowatt generators, the ratings for which have been determined by current meter measurements; and the discharge through two 5-foot waste gates when open.

Regulation.— The lakes and ponds on the main stream and tributaries above the station comprise a water-surface area of about 25.5 square miles. The natural storage afforded by these reservoirs has been largely increased by the State dam at Lower Saranac lake, the operation of which affects the distribution of flow throughout the year.

Accuracy.—At low stages there is considerable fluctuation in discharge from the operation of automatic governors on the wheel gates. Errors due to this cause are largely compensated by the use of 48 observations a day. A comparison made in July, 1914, of the discharge at the cable station, as determined by a portable recording gage, and the discharge as computed by the power plant ratings showed a very close agreement for the daily means.

Coöperation.— Records of gage heights and watt meter readings are furnished by the Plattsburg Gas & Electric Co., Herbert A. Stutchbury, superintendent. Discharge computations by the United States Geological Survey in coöperation with the State Engineer and Surveyor.

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[1] See Water Supply Paper 200, pages 98–100.

Current-meter Discharge Measurements of Saranac River at Plattsburg

DATE	Made by	a Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
May 13	C. S. De Golyer	2.88	1,300
13	C. S. De Golyer	2.85	1,220
26 b	C. S. De Golyer	2.26	584
July 8 b	C. H. Pierce	2.22	620
8 b	C. H. Pierce	2.19	584

a Slope gage below dam.
b Measurement made by wading at regular section.

Monthly Discharge of Saranac River near Plattsburg

[Drainage area, 607 square miles]

DATE	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
1908					
October	420	230	294	0.484	0.56
November	500	165	330	0.543	0.61
December	410	140	309	0.509	0.59
1909					
January	1,000	230	406	0.668	0.77
February	1,270	355	785	1.29	1.34
March	1,060	440	756	1.24	1.43
April	5,150	840	2,520	4.15	4.63
May	3,840	1,290	2,040	3.36	3.87
June	1,630	270	903	1.49	1.66
July	600	275	412	0.678	0.78
August	465	245	346	0.570	0.66
September	570	135	341	0.561	0.63
October	540	210	353	0.581	0.67
November	610	225	437	0.719	0.80
December	520	260	375	0.617	0.71
The year	5,150	135	804	1.32	17.95
1910					
January	630	310	402	0.662	0.76
February	570	305	394	0.649	0.68
March	2,770	720	1,510	2.49	2.87
April	2,030	750	1,240	2.04	2.28
May	2,200	700	982	1.62	1.87
June	1,330	320	724	1.19	1.33
July	470	255	319	0.526	0.61
August	410	250	333	0.549	0.63
September	690	300	365	0.601	0.67
October	660	295	436	0.718	0.83
November	770	295	455	0.750	0.84
December	475	220	385	0.634	0.73
The year	2,770	220	630	1.04	14.10
1911					
January	540	265	412	0.679	0.78
February	490	350	397	0.654	0.68
March	1,690	330	613	1.01	1.16
April	3,260	850	1,960	3.23	3.60
May	2,210	830	1,320	2.17	2.50
June	1,160	630	788	1.30	1.45
July	610	170	394	0.649	0.75
August	370	140	266	0.438	0.50
September	530	190	346	0.570	0.64
October	585	275	378	0.623	0.72
November	770	325	463	0.763	0.85
December	1,300	360	757	1.25	1.44
The year	3,260	140	674	1.11	15.07

Monthly Discharge of Saranac River near Plattsburg

[Drainage area, 607 square miles]

DATE	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
1912					
January	670	300	463	0.763	0.88
February	550	340	419	0.690	0.74
March	930	255	491	0.809	0.93
April	5,580	570	2,300	3.79	4.23
May	2,120	750	1,180	1.94	2.24
June	2,170	265	869	1.43	1.60
July	485	255	371	0.611	0.70
August	520	225	361	0.595	0.69
September	1,670	430	855	1.41	1.57
October	1,130	320	670	1.10	1.27
November	1,500	560	850	1.40	1.56
December	1,180	500	789	1.30	1.50
The year	5,580	225	799	1.32	17.91
1913					
January	2,960	660	1,350	2.22	2.56
February	1,080	465	625	1.03	1.07
March	6,090	400	2,190	3.61	4.16
April	4,960	1,240	2,090	3.44	3.84
May	2,170	450	840	1.38	1.59
June	1,360	370	719	1.18	1.32
July	490	260	364	0.599	0.69
August	535	160	326	0.537	0.62
September	500	155	280	0.461	0.51
October	680	250	468	0.771	0.89
November	1,050	325	672	1.11	1.24
December	970	440	656	1.08	1.24
The year	6,090	155	883	1.45	19.73
1914					
January	710	320	516	0.850	0.98
February	640	430	521	0.858	0.89
March	1,760	420	677	1.11	1.28
April	6,410	950	2,310	3.80	4.24
May	2,870	430	1,210	1.99	2.29
June	670	305	482	0.793	0.88
July	560	260	384	0.632	0.73
August	625	250	368	0.606	0.70
September	580	90	369	0.607	0.68
October	490	130	323	0.532	0.61
November	710	115	357	0.588	0.66
December	590	170	330	0.544	0.63
The year	6,410	90	653	1.07	14.57

NOTE.— Discharge as previously published for 1908–09 and preceding years, included discharge through turbines, as computed on the basis of manufacturers gate ratings. Comparisons with current-meter measurements showed those estimates to be too small, the percentage difference being greatest at the lower stages. The data for the period October 1, 1908, to December 31, 1909, has been recomputed on the basis of a current-meter rating of the discharge through the turbines and corresponding values of the kilowatt output.

AUSABLE RIVER

DESCRIPTION

Ausable river is formed by the junction of the east and west branches, which have their headwaters in the northwestern part of Essex county. The east branch flows from upper Ausable lake, at an elevation of 1,990 feet above sea level. The west branch, formed by several small streams that lie in the valley to the west and north of the east branch, receives the outflow from Lake Placid at elevation 1,864 feet. Both branches flow north and east to their junction at the village of Ausable Forks, about 20 miles from the mouth of the stream along the river, from which point the river flows northeast, entering Lake Champlain about 10 miles south of Plattsburg and opposite and slightly north of the city of Burlington, Vt. In this twenty miles a total descent of 460 feet occurs, a portion of which is in the famous Ausable chasm.

The drainage basin of Ausable river occupies a plateau at a general elevation of 800 to 1,200 feet, the mountainous boundaries of the watershed rising to altitudes of 3,000 to 5,000 feet. Throughout the entire course, the river is fed by small mountain streams that enter at nearly right angles from the mountains on either side. There are few lakes in this drainage area to act as regulators of the flow and, owing to the great differences of elevation throughout the area, the stream has what is called a flashy discharge, its fluctuations being large and rapid.

Owing to the fact that this basin lies on the eastern slope of the Adirondack mountains, the average rainfall is less than for those basins whose streams rise on the western and southern slopes, the mean yearly precipitation being about 32 inches.

Drainage Areas of Ausable River *

LOCATION	AREA	
	Place to place	Total
	Square miles	*Square miles*
Lake Placid, water-surface	....	3.80
Lake Placid, drainage area	21.80	21.80
West branch from foot of Lake Placid to junction with east branch	211.20	233.00
East branch above forks	196.90	429.90
Above gaging station	40.10	470.00
Gaging station to Keeseville	6.10	476 10
Keeseville to Birmingham	27.40	503.50
Birmingham to mouth	17.80	521.30

* From Willsboro, Ausable, Lake Placid, Mount Marcy, and Elizabethtown sheets of the United States Geological Survey topographic atlas.

AUSABLE RIVER AT AUSABLE FORKS

Location.— In the village of Ausable Forks, immediately below the junction of the east and west branches and about 15 miles above the mouth of the river.

Records available.—August 17, 1910, to December 31, 1914.

Drainage area.— 444 square miles. (Measured on U. S. Geological Survey topographic sheets.)

Gage.— Chain, on the left bank, about 1,000 feet below the junction of east and west branches of Ausable river; read twice daily; datum unchanged.

Control.— Sand and gravel; likely to shift. Channel divided by an island.

Discharge measurements.— Made from a cable about 1½ miles below the gage. At this place the river flows in one channel.

Winter flow.— Discharge relation slightly affected by ice. Flow determined from frequent discharge measurements and climatologic records.

Accuracy.— Conditions at the measuring section favorable. Discharge rating curve is well defined and estimates are good.

Special study.—A portable automatic gage was installed at this station and a continuous record of gage height obtained from July 11 to September 30, inclusive. This record showed a continual fluctuation in stage having a small range. It was found that monthly mean discharge values based on semi-daily gage heights were in error as follows: July 11–31, 3.5 per cent; August, 4.1 per cent; September, 0.5 per cent. Some of the daily discharges showed larger errors, but these errors were compensating.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Ausable River at Ausable Forks

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Jan. 1 [a]	W. S. Easterly	3.72	250
24 [b]	W. S. Easterly	3.65	190
Feb. 25 [c]	C. S. De Golyer	3.60	129
Mar. 23	W. S. Easterly	3.66	235
31	W. S. Easterly	4.42	1,040
April 1	W. S. Easterly	4.38	1,000
1	W. S. Easterly	4.46	1,070
21	C. S. De Golyer	6.25	5,170
22	C. S. De Golyer	5.52	3,220
22	C. S. De Golyer	5.41	2,950
22	C. S. De Golyer	5.39	2,950
July 7	C. S. De Golyer	3.76	274
7 [d]	C. S. De Golyer	3.74	269
10 [e]	C. H. Pierce	3.68	217
24 [f]	C. S. De Golyer	3.71	237
Aug. 19 [g]	C. C. Covert	3.58	177
Oct. 13 [h]	C. S. De Golyer	3.58	159
Oct. 13 [i]	C. S. De Golyer and A. S. Baker	3.56	150
Dec. 19 [j]	C. S. De Golyer	3.63	194

[a] Backwater from ice. Measurement made through ice 800 feet above gage.
[b] Backwater from ice. Measurement made by wading ¼ mile below gage.
[c] Backwater from ice. Measurement made through ice 2,000 feet below gage.
[d] Measurement made by wading 500 feet above cable.
[e] Measurement made by wading 500 feet above gage.
[f] Measurement made by wading 400 feet above gage.
[g] Measurement made by wading 1 mile below gage.
[h] Measurement made by wading 550 feet above gage.
[i] Measurement made by wading 500 feet above gage.
[j] Measurement made by wading through ice 20 feet below cable below gage.

Daily Gage Height, in Feet, of Ausable River at Ausable Forks

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.73	3.94	3.57	4.04	5.35	3.78	3.66	3.59	3.79	3.59	3.52	3.87
2	3.71	3.86	3.62	4.55	5.45	3.78	3.68	3.51	3.70	3.70	3.56	4.34
3	3.74	3.84	3.65	4.36	4.90	3.75	3.75	3.54	3.67	3.59	3.70	4.49
4	3.66	3.84	3.63	4.22	5.20	3.80	3.68	3.51	3.70	3.58	3.68	4.22
5	3.62	3.84	3.65	4.18	5.30	4.16	3.64	3.53	3.63	3.66	3.66	4.15
6	3.66	3.98	3.65	4.10	4.95	3.98	3.84	3.56	3.55	3.58	3.66	3.70
7	3.65	3.69	3.65	4.15	5.20	3.84	3.72	3.51	3.72	3.58	3.68	4.24
8	3.71	3.79	3.65	4.05	4.95	3.80	3.81	3.49	3.88	3.52	3.62	3.88
9	3.66	4.05	3.66	5.50	4.90	3.74	3.78	3.43	3.82	3.52	3.67	3.80
10	3.69	3.85	3.74	4.50	4.80	3.74	3.66	3.45	3.78	3.53	3.63	3.62
11	4.35	3.85	3.65	4.60	4.80	3.62	3.71	3.47	3.69	3.60	3.62	3.60
12	3.82	4.11	3.67	4.60	4.65	3.60	3.81	3.46	3.64	3.64	3.65	3.54
13	3.68	4.20	3.64	4.32	4.49	3.59	3.76	3.43	3.57	3.53	3.60	3.52
14	3.58	3.92	3.60	4.26	4.50	3.59	3.67	3.45	3.56	3.62	3.66	3.59
15	3.78	3.75	3.56	4.42	4.40	3.58	3.62	3.42	3.55	3.61	3.59	3.62
16	3.90	4.12	3.70	4.55	4.26	3.58	3.59	3.46	3.55	3.58	3.61	3.58
17	3.74	3.98	4.23	4.45	4.23	3.57	3.56	3.48	3.52	3.60	4.21	3.70
18	3.70	3.84	4.22	4.85	4.37	3.60	3.50	3.51	3.50	3.69	3.95	3.66
19	3.91	3.76	3.85	7.30	4.39	3.51	3.51	3.55	3.45	3.71	3.82	3.65
20	3.72	3.60	3.90	8.30	4.37	3.52	3.54	3.60	3.42	3.72	3.76	3.65
21	3.72	3.62	3.75	6.70	4.90	3.66	3.51	3.61	3.45	3.74	3.76	3.60
22	3.84	3.58	3.64	5.50	4.12	3.62	3.52	3.58	3.47	3.68	3.74	3.65
23	3.82	3.48	3.68	5.35	4.38	3.58	3.54	3.61	3.46	3.68	3.89	3.70
24	3.66	3.52	3.68	5.15	4.10	3.57	3.65	3.56	3.49	3.66	3.82	3.69
25	3.62	3.64	3.75	5.05	3.98	3.62	3.62	3.52	3.54	3.56	3.72	3.78
26	4.25	3.62	4.55	5.30	4.01	3.56	3.59	3.48	3.55	3.63	3.77	3.96
27	3.78	3.61	5.05	5.45	4.00	3.48	3.59	3.48	3.54	3.55	3.84	3.96
28	3.68	3.62	5.00	6.00	4.20	3.44	3.55	3.49	3.73	3.54	3.84	3.98
29	3.75	......	3.70	6.50	3.90	3.74	3.56	3.56	3.66	3.58	3.78	3.97
30	4.15	......	3.55	6.10	3.84	3.65	3.60	3.90	3.67	3.60	3.84	3.83
31	3.98	......	4.24	......	3.75	......	3.61	3.89	......	3.54	......	3.72

NOTE.— Discharge relation affected by ice, January 1 to 27, February 11 to 28, inclusive, and lightly for short periods during November and December. Gage heights from July 11 to September 30, inclusive, are means of 24 hourly gage heights each day from the portable automatic gage.

Daily Discharge, in Second-feet, of Ausable River at Ausable Forks

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	250	520	151	550	2,840	294	204	161	302	161	125	374
2......	241	431	179	1,240	3,070	294	217	120	230	230	146	926
3......	265	409	198	954	1,860	270	270	135	211	161	230	1,140
4......	202	409	185	766	2,490	310	217	120	230	156	217	766
5......	174	409	198	716	2,720	692	192	130	185	204	204	680
6......	202	567	198	620	1,960	484	347	146	140	156	204	230
7......	194	265	198	680	2,490	347	246	120	246	156	217	484
8......	282	358	198	562	1,960	310	319	111	384	125	179	384
9......	241	642	204	3,190	1,860	262	294	87	328	125	211	310
10......	265	420	262	1,160	1,670	262	204	95	294	130	185	179
11......	1,080	......	198	1,320	1,670	179	238	103	224	166	179	166
12......	388	......	211	1,320	1,400	166	319	99	194	192	198	135
13......	218	......	192	898	1,140	161	278	87	151	130	166	125
14......	147	......	166	818	1,160	161	211	95	146	179	204	161
15......	301	......	146	1,040	1,010	156	179	83	140	172	161	179
16......	420	......	230	1,240	818	156	161	99	140	156	172	156
17......	265	......	779	1,080	779	151	146	107	125	166	753	230
18......	234	......	766	1,760	968	166	115	120	115	224	453	204
19......	431	......	356	8,400	996	120	120	140	95	238	328	198
20......	249	......	402	12,100	968	125	135	166	83	246	278	198
21......	249	140	270	6,490	1,860	204	120	172	95	262	278	166
22......	358	117	192	3,190	644	179	125	156	103	217	262	......
23......	339	70	217	2,840	982	156	135	172	99	217	230	......
24......	194	87	217	2,380	620	151	198	146	111	204	230	......
25......	174	127	270	2,160	484	179	179	125	135	146	246	......
26......	846	140	1,240	2,720	516	146	161	107	140	185	286	......
27......	301	131	2,160	3,070	504	107	161	107	135	140	347	......
28......	257	140	2,060	4,480	740	91	140	111	254	135	347	......
29......	320	......	230	5,890	402	262	146	146	204	156	294	......
30......	804	......	140	4,750	347	198	166	402	211	166	347	......
31......	567	......	792	......	270	......	172	393	......	135	......	......
Mean...	337	332	426	2,610	1,330	225	197	141	182	175	256	294

NOTE.— Daily discharge given within the frozen periods, January 1 to 27, February 21 to 28 and portions of November and December, are only approximate. Daily discharge for open water periods based upon well-defined rating curves. New rating curves used, beginning March 1, 1914

Monthly Discharge of Ausable River at Ausable Forks
[Drainage area, 444 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January....................	1,080	147	337	0.759	0.88	B
February....................	720	70	332	0.748	0.78	C
March....................	2,160	140	426	0.959	1.11	B
April....................	12,100	550	2,610	5.88	6.56	B
May....................	3,070	270	1,330	3.00	3.46	A
June....................	692	91	225	0.507	0.57	A
July....................	347	115	197	0.444	0.51	A
August....................	402	83	141	0.317	0.36	A
September....................	384	83	182	0.410	0.46	A
October....................	262	125	175	0.394	0.45	A
November....................	753	125	256	0.577	0.64	A
December....................	1,140	....	294	0.662	0.76	B
The year....................	12,100	83	541	1.22	16.54	

NOTE.— Main discharge, February 11 to 20, estimated, 391 second-feet, and December 22 to 30, estimated, 165 second-feet.

LAKE GEORGE

LAKE GEORGE AT LAKE GEORGE, SAGAMORE AND ROGERS ROCK

For the purpose of determining the rate of change and the range in elevation of the water-surface of the lake, gages were established on Lake George in July, 1913, at three points — Lake George, Sagamore (Bolton Landing) and Rogers Rock — by the United States Geological Survey in coöperation with the New York State Conservation Commission.

The gage at Lake George was fastened to the concrete wall underneath the east side of the pagoda at Fort William Henry hotel, near the landing used for motor boats. The observer is G. L. Martin.

At Sagamore the gage was fastened to the south side of the coal dock for Sagamore hotel, on the west side of Green island, about 200 feet north of the eastern end of the highway bridge that joins the island and the mainland. The observer is S. G. Finkle.

At Rogers Rock the gage is fastened to a pile in the back end of a covered boat house. The boat house is in a bay on the north side of the steamboat landing. The observer is George O. Cook.

All gages are of the vertical staff type, made up of standard bronze section graduated to feet, tenths and half-tenths. The sections are securely fastened to bed planks, which in turn are fastened to the piles or concrete support. They were not set to any particular datum, but each gage was referred to a substantial bench-mark by the use of an engineer's level. The gages are read once each day to the nearest half-tenths and the force and direction of the wind are recorded.

A comparative study of these gage heights and those obtained at the mill of the International Paper Company indicates that the zeros of all three gages are below the crest of the dam as follows:

Lake George	4.75 feet below crest
Sagamore	4.9 feet below crest
Rogers Rock	3.4 feet below crest

All three gages were read until June 30, 1914. Comparison of the records up to this date showed that one gage would indicate the mean elevation of the lake and the observations at Lake George and Sagamore were discontinued July 1, 1914. The results of the observations are presented in the following tables:

Daily Gage Height, in Feet, and Wind Data at Stations on Lake George

1913	Lake George, July			Sagamore, July			Rogers Rock, July			Lake George, August			Sagamore, August			Rogers Rock, August		
	Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND	
		Direction	Force		Direction	Force		Direction	Force		Direction	Force		Direction	Force		Direction	Force
1	......	....	....	......	....	....	......	....	....	4.30	S	H	4.50	S	H	3.50	S	H
2	......	....	....	......	....	....	......	....	....	4.30	....	....	4.50	W	L	3.00	S	L
3	......	....	....	......	....	....	......	....	....	4.35	....	....	4.45	W	L	3.00	S	M
4	......	....	....	......	....	....	......	....	....	4.40	N	....	4.45	N	L	2.95	N	M
5	......	....	....	......	....	....	......	....	....	4.35	....	....	4.45	S	L	2.92	N	L
6	......	....	....	......	....	....	......	....	....	4.35	....	....	4.45	Calm		2.95	S	H
7	......	....	....	......	....	....	......	....	....	4.30	....	....	4.45	Calm		2.80	N	H
8	......	....	....	......	....	....	......	....	....	4.25	....	....	4.40	S	H	2.85	S	L
9	......	....	....	4.90	S	H	......	....	....	4.25	....	....	4.35	Calm		2.80	S	M
10	......	....	....	4.90	W	L	3.40	SW	M	4.20	....	....	4.35	NE	H	2.85	S	M
11	......	....	....	4.80	N	L	3.40	SW	M	4.20	....	....	4.35	NE	H	2.80	N	H
12	......	....	....	4.80	S	L	3.35	S	M	4.20	....	....	4.30	Calm		2.75	Calm	
13	......	....	....	4.80	Calm		3.30	S	H	4.10	....	....	4.25	Calm		2.72	S	M
14	......	....	....	4.75	Calm		3.35	SW	....	4.10	....	....	4.20	S	L	2.72	S	L
15	......	....	....	4.75	Calm		3.30	N	L	4.10	....	....	4.15	Calm		2.70	S	L
16	......	....	....	4.75	NE	H	3.25	N	M	4.10	....	....	4.15	Calm		2.70	S	L
17	......	....	....	4.70	Calm		3.25	SW	M	4.10	....	....	4.10	Calm		2.65	Calm	
18	......	....	....	4.70	N	L	3.20	S	M	4.10	....	....	4.10	NE	....	2.62	N	M
19	......	....	....	4.70	Calm		3.20	N	L	4.10	N	H	4.10	NE	....	2.50	N	H
20	......	....	....	4.65	Calm		3.20	Calm		4.10	N	H	4.05	NE	....	2.55	N	L
21	......	....	....	4.65	Calm		3.20	Calm		3.90	....	....	4.05	S	H	2.58	S	M
22	......	....	....	4.65	Calm		3.18	S	M	3.80	S	H	4.00	S	H	2.55	S	H
23	......	....	....	4.65	S	H	3.20	S	H	3.80	S	H	4.00	SW	L	2.50	S	H
24	4.45	N	....	4.65	Calm		3.18	S	M	3.80	....	....	3.90	SW	L	2.50	S	M
25	4.50	....	....	4.60	N	L	3.10	N	L	3.80	....	....	3.90	Calm		2.48	N	L
26	4.45	....	....	4.60	S	L	3.10	S	M	3.80	....	....	3.90	S	L	2.50	S	H
27	4.45	....	....	4.60	S	L	3.08	S	M	3.80	....	....	3.85	N	L	2.48	S	M
28	4.45	....	....	4.60	Calm		3.10	S	M	3.80	....	....	3.85	Calm		2.40	N	L
29	4.45	....	....	4.60	Calm		3.08	S	M	3.75	S	....	3.85	Calm		2.40	S	M
30	4.50	....	....	4.55	Calm		3.08	N	L	3.75	....	....	3.80	Calm		2.40	S	H
31	4.45	N	H	4.50	Calm		3.00	N	L	3.70	....	....	3.80	Calm		2.38	S	L

L = Light. M = Moderate. H = Heavy.

Daily Gage Height, in Feet, and Wind Data at Stations on Lake George

1913	LAKE GEORGE, SEPTEMBER			SAGAMORE, SEPTEMBER			ROGERS ROCK, SEPTEMBER			LAKE GEORGE, OCTOBER			SAGAMORE, OCTOBER			ROGERS ROCK, OCTOBER		
	Gage height in feet	WIND Direction	WIND Force	Gage height in feet	WIND Direction	WIND Force	Gage height in feet	WIND Direction	WIND Force	Gage height in feet	WIND Direction	WIND Force	Gage height in feet	WIND Direction	WIND Force	Gage height in feet	WIND Direction	WIND Force
1	3.75	....	....	3.80	Calm		2.35	Calm		3.35	N	....	3.45	Calm		1.90	S	M
2	3.70	....	....	3.80	S	L	2.35	S	M	3.35	N	....	3.50	Calm		1.90	N	H
3	3.70	....	....	3.80	N E	H	2.35	S	H	3.35	N	....	3.50	N E	L	2.00	N	M
4	3.65	....	....	3.75	N E	L	2.30	N	H	3.35	N	....	3.50	N E	H	1.90	N	H
5	3.65	....	....	3.75	N E	L	2.20	N	M	3.30	S	....	3.50	N E	L	1.95	Calm	
6	3.60	....	....	3.75	N E	L	2.20	N	L	3.30	S	....	3.45	Calm		1.98	S W	H
7	3.60	....	....	3.70	Calm		2.25	S	M	3.25	S	....	3.45	S	L	1.95	S	L
8	3.55	....	....	3.70	N E	H	2.25	N	L	3.25	N	....	3.40	Calm		1.92	S W	L
9	3.55	....	....	3.70	N E	H	2.00	N	H	3.25	N	....	3.40	Calm		1.92	Calm	
10	3.50	....	....	3.65	N E	H	2.10	N	M	3.25	N	....	3.40	Calm		1.92	S	M
11	3.50	....	....	3.60	Calm		2.10	Calm		3.25	N	....	3.40	S	H	1.90	S W	M
12	3.45	....	....	3.60	W	H	2.10	N	L	3.25	S	....	3.35	N	L	1.90	S W	L
13	3.45	....	....	3.55	W	H	2.08	S	L	3.25	S	....	3.35	N E	H	1.90	N	L
14	3.40	....	....	3.55	N E	H	2.05	N	H	3.25	N E	....	3.35	N E	H	1.85	N	H
15	3.35	....	....	3.50	N E	H	2.00	N	M	3.25	N E	....	3.30	N E	H	1.90	N	M
16	3.30	....	....	3.50	S	L	2.02	S	M	3.25	N E	....	3.30	N E	H	1.80	N	H
17	3.30	....	....	3.50	S	L	2.00	S	M	3.25	N E	....	3.30	N E	H	1.80	N	M
18	3.30	....	....	3.45	N E	....	2.00	S	....	3.25	N E	....	3.30	N E	H	1.80	S	M
19	3.25	....	....	3.45	S	L	1.98	N	L	3.20	S	....	3.30	N E	H	1.70	N	H
20	3.25	....	....	3.45	S	L	1.95	Calm		3.15	S	....	3.35	S	H	1.90	S	L
21	3.25	S	....	3.40	S	H	1.92	S	L	3.15	S	....	3.40	S	H	2.10	S	H
22	3.35	S	....	3.55	S	L	2.10	S	M	3.15	N	....	3.40	S	H	1.88	S E	.....
23	3.35	N	....	3.55	S	L	2.10	N	L	3.15	S E	....	3.40	S	H	1.98	S	H
24	3.35	N	....	3.55	Calm		2.08	Calm		3.15	S	....	3.45	S	H	1.88	S	L
25	3.35	W	....	3.50	S	H	2.08	S	H	3.15	S	....	3.50	S	H	1.90	Calm	
26	3.35	S	....	3.50	Calm		2.05	S	M	3.20	N	....	3.55	N E	H	1.95	N	L
27	3.35	N	H	3.50	W	H	2.00	S W	M	3.20	N	....	3.60	S	L	2.05	Calm	
28	3.35	N	....	3.50	W	H	2.02	S E	H	3.20	N	....	*3.60	S	L	2.10	S	M
29	3.35	N	....	3.50	S	L	2.00	S	H	3.20	N	....	3.60	S	L	2.10	S	M
30	3.35	S	....	3.45	N E	L	1.90	N	H	3.20	N	....	3.55	Calm		2.05	N	M
31	......	....	....	......	....	....	......	....	....	3.20	N	....	3.55	N	L	2.10	S W	H

L = Light. M = Moderate. H = Heavy.

Daily Gage Height, in Feet, and Wind Data at Stations on Lake George

1913	LAKE GEORGE, NOVEMBER			SAGAMORE, NOVEMBER			ROGERS ROCK, NOVEMBER			LAKE GEORGE, DECEMBER			SAGAMORE, DECEMBER			ROGERS ROCK, DECEMBER		
	Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND	
		Direction	Force		Direction	Force		Direction	Force		Direction	Force		Direction	Force		Direction	Force
1	3.20	S W	....	3.50	N W	M	2.08	S W	H	3.15	S	....	3.30	S	L	1.82	S	M
2	3.20	S	....	3.50	S	L	2.00	N	M	3.15	S	....	3.25	Calm		1.80	Calm	
3	3.20	N	....	3.50	N	L	2.00	S	M	3.15	N	....	3.25	W	L	1.80	N	M
4	3.20	S	....	3.45	N	L	2.05	S W	H	3.15	N	....	3.25	N	L	1.78	Calm	
5	3.20	N W	....	3.45	Calm		2.00	S E	L	3.10	N E	....	3.20	Calm		1.70	N	M
6	3.20	N	....	3.45	S	L	1.98	S	H	3.10	W	....	3.20	N E	L	1.75	S	M
7	3.20	S E	....	3.40	S	L	1.95	S	L	3.10	S	....	3.20	S	M	1.78	S	L
8	3.20	S	....	3.40	S	L	1.92	S	L	3.10	S	....	3.20	Calm		1.90	S	H
9	3.20	S	....	3.40	S	H	1.90	N E	L	3.10	S E	....	3.25	S	M	1.95	S	M
10	3.20	S	....	3.40	S	H	2.10	S	H	3.10	S	....	3.25	S	M	1.95	S	H
11	3.25	N E	....	3.40	S	H	2.02	S	H	3.10	N	....	3.30	Calm		1.85	N	H
12	3.25	N	....	3.40	S	H	2.00	S	L	3.10	N	....	3.30	Calm		1.95	S	M
13	3.25	W	....	3.40	S	M	2.00	S	M	3.10	W	....	3.30	Calm		1.85	Calm	
14	3.25	N	....	3.40	W	L	1.98	Calm		3.10	S	....	3.30	N W	M	1.90	S	M
15	3.25	N	....	3.40	S	L	1.90	N W	L	3.10	S	....	3.30	Calm		1.85	S	H
16	3.25	N	....	3.40	N	L	1.90	N	M	3.10	N	....	3.30	S	H	1.80	N	L
17	3.25	S	....	3.35	S	H	1.90	Calm		3.10	N	....	3.25	S	H	1.85	S	H
18	3.20	S	....	3.35	S	L	1.90	S	H	3.10	S W	....	3.25	S	L	1.80	Calm	
19	3.20	S	....	3.35	S	H	1.88	S	L	3.10	S	....	3.25	S	L	1.80	S	M
20	3.20	S	....	3.35	Calm		1.90	S	M	3.10	S	....	3.25	S	L	1.78	S	M
21	3.20	W	....	3.35	Calm		1.85	Calm		3.10	S W	....	3.25	Calm		1.75	Calm	
22	3.20	S	....	3.35	S	H	1.80	S	M	3.10	N E	....	3.25	N	L	1.70	N	H
23	3.20	S W	....	3.35	S W	H	1.85	S W	H	3.10	N	....	3.25	Calm		1.75	Calm	
24	3.20	W	....	3.35	N	L	1.85	S	H	3.10	N	....	3.30	Calm		1.75	N	L
25	3.20	N	....	3.30	S	L	1.85	S W	M	3.10	N	....	3.30	N E	L	1.78	N	L
26	3.20	N	....	3.30	N E	H	1.80	N	H	3.10	N	....	3.30	N E	H	1.90	N	H
27	3.20	N	....	3.30	N	L	1.80	N	M	3.10	N	....	3.30	Calm		1.90	N	M
28	3.15	N	....	3.30	Calm		1.80	S W	L	3.10	S	....	3.30	S	L	1.90	N	L
29	3.15	S	....	3.30	N	L	1.78	N	M	3.10	S	....	3.30	S	L	1.85	N E	M
30	3.15	S	....	3.30	Calm		1.80	S	M	3.10	N	....	3.30	W	M	1.80	S	M
31	......	....	....	......	....	....	......	....	....	3.10	N	....	3.30	N E	M	1.80	S	M

L = Light. M = Moderate. H = Heavy.

Daily Gage Height, in Feet, and Wind Data at Stations on Lake George

1914	LAKE GEORGE, JANUARY			SAGAMORE, JANUARY			ROGERS ROCK, JANUARY			LAKE GEORGE, FEBRUARY			SAGAMORE, FEBRUARY			ROGERS ROCK, FEBRUARY		
	Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND	
		Di-rec-tion	Force		Di-rec-tion	Force		Di-rec-tion	Force		Di-rec-tion	Force		Di-rec-tion	Force		Di-rec-tion	Force
1	3.10	N	....	3.30	S W	....	1.75	N E	L	3.00	W	....	3.20	S	L	1.75	S	L
2	3.10	N	....	3.30	S	L	1.80	S	M	3.05	S	....	3.20	S	L	1.72	S W	M
3	3.10	S	....	3.30	N E	L	1.70	N	L	3.05	S	....	3.20	S	L	1.72	W	M
4	3.10	N E	....	3.30	N E	L	1.70	N	H	3.05	W	....	3.20	S W	....	1.78	W	H
5	3.10	N E	....	3.30	N E	H	1.70	N	H	3.05	S	....	3.20	S W	....	1.70	Calm	
6	3.10	S	....	3.30	S	L	1.78	S	L	3.05	S	....	3.20	N E	....	1.70	S E	L
7	3.10	N	....	3.30	S	L	1.75	S	H	3.05	S	....	3.20	S	....	1.72	W	H
8	3.10	N	....	3.25	S	L	1.70	Calm		3.05	N W	....	3.20	N E	....	1.72	S W	H
9	3.10	S	....	3.25	Calm		1.70	Calm		3.05	S	....	3.25	N E	....	1.75	S	M
10	3.10	S	....	3.25	N W	....	1.75	S	M	3.05	N	....	3.25	N E	....	1.72	N	H
11	3.10	N	....	3.20	S	L	1.68	N	L	3.05	N E	....	3.25	N W	....	1.70	N	L
12	3.10	N	....	3.20	W	H	1.70	S W	H	3.05	N E	....	3.25	N W	....	1.68	N	M
13	3.10	N	....	3.20	W	H	1.70	N	M	3.05	N E	....	3.25	N E	....	1.68	N E	H
14	3.10	W	....	3.20	W	H	1.65	N	L	......	N E	....	3.25	N E	....	1.70	N E	H
15	3.00	S	....	3.25	N E	H	1.65	S	L	3.30	W	....	3.25	N E	....	1.72	N	L
16	3.00	N	....	3.25	Calm		1.95	S	L	3.30	S	....	3.25	N E	....	1.80	S	L
17	3.00	S	....	3.25	N E	L	1.60	N	H	3.25	N	....	3.25	N E	....	1.85	Calm	
18	2.95	S	....	3.25	N E	L	1.62	N	L	3.25	N	....	3.25	N E	....	1.85	S W	L
19	2.95	S	....	3.25	Calm		1.65	S W	M	3.25	N E	....	3.25	N E	....	1.80	N E	M
20	2.95	S	....	3.25	S	L	1.60	N	M	3.25	N E	....	3.25	N E	....	1.75	N E	H
21	2.95	S	....	3.25	S	L	1.62	S	L	3.25	N E	....	3.25	N E	....	1.78	Calm	
22	2.95	W	....	3.25	S	H	1.60	S	L	3.25	S	....	3.25	S E	....	1.80	S W	M
23	2.95	N	....	3.25	Calm		1.60	S	M	3.25	E	....	3.25	N E	....	1.75	N	H
24	2.95	S	....	3.25	W	L	1.65	S W	L	3.20	N E	....	3.30	N E	....	1.75	N	H
25	2.95	S	....	3.20	W	L	1.65	N	H	3.20	S	....	3.30	S E	....	1.78	S W	M
26	2.95	S	....	3.20	S	L	1.65	N W	L	3.15	N	....	3.30	S E	....	1.70	S	M
27	2.95	E	....	3.20	S	L	1.68	S	H	3.15	S	....	3.30	S E	....	1.70	S W	L
28	2.95	S	....	3.15	N	L	1.62	N W	M	3.15	S	....	3.30	S E	....	1.72	Calm	
29	2.95	W	....	3.15	S	H	1.65	S	H	......	....	....	......	....	....	......	....	.....
30	2.95	S	....	3.15	W	L	1.75	N W	L	......	....	....	......	....	....	......	....	.....
31	2.95	S	....	3.20	N E	L	1.78	S	M	......	....	....	......	....	....	......	....	.....

L = Light, H = Heavy, M = Moderate,

Daily Gage Height, in Feet, and Wind Data at Stations on Lake George

1914	LAKE GEORGE, MARCH			SAGAMORE, MARCH			ROGERS ROCK, MARCH			LAKE GEORGE, APRIL			SAGAMORE, APRIL			ROGERS ROCK, APRIL		
	Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND	
		Direction	Force		Direction	Force		Direction	Force		Direction	Force		Direction	Force		Direction	Force
1	3.15	N E	....	3.30	N E	....	1.78	N	H	3.80	S	....	3.55	S W	....	2.35	S	L
2	3.30	W	....	3.30	N E	....	1.90	N	L	4.00	S	....	3.65	N E	....	2.60	N	H
3	3.30	S	....	3.30	S	....	1.85	N	M	4.10	W	....	3.80	N E	....	2.80	N	M
4	3.30	W	....	3.30	S	....	1.90	S W	M	4.15	S W	....	3.90	S	....	2.85	S	M
5	3.30	W	....	3.30	S	....	1.85	N	M	4.20	S W	....	4.00	N E	....	2.90	N	M
6	3.30	N	....	3.30	Calm		1.80	N	M	4.25	S W	....	4.10	N E	....	2.95	S W	H
7	3.30	W	....	3.30	W	....	1.90	S	M	4.30	S W	....	4.20	N E	....	2.90	N E	L
8	3.30	S W	....	3.30	S W	....	1.90	S W	H	4.40	N	....	4.40	N W	....	3.00	N	L
9	3.30	S	....	3.30	W	....	1.90	S	M	4.70	W	....	4.80	S W	....	3.35	S W	M
10	3.30	S	....	3.35	S	....	1.85	N	M	4.80	N	....	5.00	S W	....	3.45	S W	H
11	3.30	W	....	3.35	S	....	1.85	N	M	4.85	S	....	5.15	S W	....	3.55	S	H
12	3.30	S	....	3.35	S	....	1.88	N	L	5.00	W	....	5.20	W	....	3.60	S W	H
13	3.30	S	....	3.35	S	....	1.80	N W	L	5.10	N E	....	5.25	N W	....	3.70	N	M
14	3.30	N	....	3.40	S	....	1.80	N	L	5.15	N	....	5.30	N E	....	3.75	S	M
15	3.25	N E	....	3.40	S	....	1.80	N W	L	5.15	S E	....	5.35	N E	....	3.80	S	M
16	3.25	N	....	3.40	S	....	1.82	S W	H	5.25	S	....	5.40	N E	....	3.90	N	H
17	3.25	N	....	3.40	S W	....	1.90	S	L	5.30	W	....	5.45	N E	....	3.95	Calm	
18	3.25	N E	....	3.40	S W	....	1.85	N	H	5.35	N E	....	5.50	S W	....	4.05	S	M
19	3.25	S	....	3.40	Calm		1.88	S W	H	5.55	S W	....	5.55	S W	....	4.20	S	M
20	3.25	N E	....	3.45	S	....	1.85	Calm		5.80	S W	....	5.90	Calm		4.50	N	H
21	3.25	S	....	3.45	S	....	1.85	S	L	6.00	N	....	6.10	Calm		4.72	N W	M
22	3.20	S	....	3.45	S	....	1.85	S	M	6.10	S W	....	6.20	W	....	4.80	S W	H
23	3.20	S	....	3.45	S	....	1.82	S	M	6.15	N	....	6.30	W	....	4.75	N E	H
24	3.20	S	....	3.50	S	....	1.80	Calm		6.15	S E	....	6.35	Calm		4.75	N W	M
25	3.20	S	....	3.50	S	....	1.82	S	L	6.15	S	....	6.35	S E	....	4.80	S	H
26	3.25	S	....	3.55	N E	....	1.85	S	M	6.15	S E	....	6.35	N E	....	4.80	Calm	
27	3.30	S	....	3.55	N E	....	2.00	S W	....	6.20	N	....	6.35	N E	....	4.85	N	L
28	3.35	N E	....	3.55	N E	....	2.05	N	L	6.20	S	....	6.40	S W	....	4.88	S	L
29	3.45	S	....	3.55	Calm		2.10	N	L	6.20	N E	....	6.45	N E	....	4.85	N	H
30	3.60	S	....	3.55	S	....	2.25	N	M	6.30	N E	....	6.50	N E	....	4.92	N	H
31	3.65	N	....	3.55	N E	....	2.30	N	L	......	....	....	......	....	....	......	....	.....

L = Light. H = Heavy. M = Moderate.

Daily Gage Height, in Feet, and Wind Data at Stations on Lake George

1914	LAKE GEORGE, MAY			SAGAMORE, MAY			ROGERS ROCK, MAY			LAKE GEORGE, JUNE			SAGAMORE, JUNE			ROGERS ROCK, JUNE		
	Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND	
		Di-rec-tion	Force		Di-rec-tion	Force		Di-rec-tion	Force		Di-rec-tion	Force		Di-rec-tion	Force		Di-rec-tion	Force
1	6.30	N W	....	6.50	N E	....	4.95	N	H	5.45	N	....	5.65	Calm		4.15	N	M
2	6.30	W	....	6.45	N E	....	4.98	N	H	5.45	W	....	5.60	Calm		4.10	N	M
3	6.30	S E	....	6.45	Calm		4.95	Calm		5.45	S E	....	5.60	N E	....	4.10	Calm	
4	6.25	S E	....	6.40	N	L	4.92	N	M	5.45	S E	....	5.60	Calm		4.15	Calm	
5	6.25	S	....	6.40	Calm		4.88	Calm		5.45	N W	....	5.60	Calm		4.12	N	M
6	6.25	N	....	6.35	Calm		4.80	N	H	5.45	N	....	5.55	Calm		4.10	Calm	
7	6.25	N	....	6.35	Calm		4.80	Calm		5.40	W	....	5.55	S	L	4.10	S	M
8	6.20	N E	....	6.30	N E	....	4.78	S	L	5.40	N E	....	5.55	Calm		4.10	Calm	
9	6.20	S	....	6.30	N E	....	4.75	N	L	5.40	S	....	5.50	N	L	4.10	S	M
10	6.10	W	....	6.25	S W	....	4.70	S W	M	5.40	N W	....	5.50	N	L	4.10	S W	M
11	6.05	N	....	6.25	S W	....	4.65	N	M	5.40	W	....	5.50	W	L	4.05	Calm	
12	6.00	N W	....	6.20	Calm		4.60	N	L	5.40	N	....	5.45	Calm		4.05	S W	M
13	5.95	N W	....	6.15	Calm		4.65	S W	L	5.35	N E	....	5.45	Calm		4.00	S W	L
14	5.90	N E	....	6.10	W	L	4.62	S	L	5.35	N E	....	......	....	....	3.98	S	L
15	5.90	W	....	6.50	Calm		4.55	N	M	5.30	S	....	......	....	....	4.00	S W	M
16	5.85	S	....	6.00	N E	....	4.50	N	M	5.25	S	....	......	....	....	3.90	N W	M
17	5.80	W	....	6.00	Calm		4.50	Calm		5.20	N	....	......	....	....	3.90	S W	L
18	5.80	W	....	6.00	Calm		4.48	S	M	5.15	S	....	......	....	....	3.88	S	M
19	5.80	S W	....	6.00	Calm		4.45	S	L	5.15	S	....	......	....	....	3.90	S	H
20	5.80	S W	....	5.95	Calm		4.40	Calm		5.15	N	....	......	....	....	3.80	S W	H
21	5.75	S	....	5.95	W	L	4.38	Calm		5.10	N	....	......	....	....	3.80	Calm	
22	5.75	S	....	5.90	W	L	4.35	S	M	5.10	N	....	......	....	....	3.80	Calm	
23	5.70	N W	....	5.90	Calm		4.32	S W	H	5.10	W	....	......	....	....	3.78	S W	L
24	5.65	N W	....	5.85	S	L	4.32	S	L	5.10	N	....	......	....	....	3.80	S	M
25	5.60	S E	....	5.85	S	L	4.35	S	M	5.10	N	....	......	....	....	3.78	S	L
26	5.60	S	....	5.80	S	L	4.30	S	H	5.05	S	....	......	....	....	3.70	N	L
27	5.55	N E	....	5.75	Calm		4.30	S W	H	5.05	N E	....	......	....	....	3.68	N	M
28	5.55	W	....	5.75	Calm		4.20	N E	H	5.00	N E	....	......	....	....	3.65	S	M
29	5.55	S W	....	5.70	N W	L	4.20	S	L	5.00	S	....	......	....	....	3.70	S	M
30	5.50	S	....	5.70	Calm		4.18	S	M	5.00	N E	....	......	....	....	3.60	N	M
31	5.45	W	....	5.65	S W	L	4.15	S	M	......	....	....	......	....	....	......	....	.....

L = Light. H = Heavy. M = Moderate.

Daily Gage Height, in Feet, and Wind Data at Stations on Lake George

1914	ROGERS ROCK, JULY			ROGERS ROCK, AUGUST			ROGERS ROCK, SEPTEMBER			ROGERS ROCK, OCTOBER			ROGERS ROCK, NOVEMBER			ROGERS ROCK, DECEMBER		
	Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND		Gage height in feet	WIND	
		Direction	Force		Direction	Force		Direction	Force		Direction	Force		Direction	Force		Direction	Force
1	3.62	N	L	3.28	S	L	3.12	S	M	2.42	N W	M	1.85	S	L	1.58	S	M
2	3.65	Calm		3.30	S	M	3.12	S	M	2.45	N W	L	1.82	S W	M	1.55	S	L
3	3.68	S	L	3.28	N	H	3.15	S	M	2.42	Calm		1.75	N W	M	1.58	S	L
4	3.65	S	L	3.25	N	L	3.12	S W	H	2.42	S W	M	1.90	S	H	1.48	N	H
5	3.65	S	L	3.20	S	M	3.10	S	M	2.40	Calm		1.70	S W	M	1.50	N	H
6	3.65	N	L	3.25	S	M	3.05	S	M	2.30	N W	H	1.68	N W	L	1.48	N	M
7	3.65	N	M	3.22	S	L	3.10	S	M	2.32	S W	M	1.68	S E	M	1.40	N	H
8	3.70	S	M	3.20	Calm		3.00	N	M	2.30	S W	L	1.65	N W	L	1.38	N W	H
9	3.65	Calm		3.15	Calm		2.98	N	M	2.30	S W	M	1.62	N W	M	1.40	N E	L
10	3.60	S	M	3.18	S	M	2.92	N	L	2.30	S W	M	1.60	N W	L	1.40	N	L
11	3.65	S	M	3.20	S	M	2.90	N	M	2.28	S W	H	1.65	S	H	1.45	Calm	
12	3.60	Calm		3.05	N	H	2.88	N	M	2.25	W	M	1.60	S W	M	1.42	Calm	
13	3.62	S	L	3.10	Calm		2.85	N	M	2.15	N W	H	1.58	E	M	1.45	S	M
14	3.60	S	M	3.12	S	H	2.85	Calm		2.20	Calm		1.52	N W	L	1.60	S W	H
15	3.60	S	L	3.08	Calm		2.80	S	L	2.15	S	M	1.60	S	M	1.60	S	H
16	3.60	S	M	3.08	Calm		2.80	N	L	2.08	N W	M	1.65	S	H	1.55	S	M
17	3.65	S	H	3.10	Calm		2.78	Calm		2.10	Calm		1.70	S W	H	1.50	S	M
18	3.62	S	M	3.10	S	M	2.75	N	L	2.12	N	L	1.60	S W	H	1.48	S	M
19	3.55	N W	M	3.05	S	L	2.70	N	L	2.15	Calm		1.52	S W	M	1.45	S	H
20	3.60	S	L	3.05	S	M	2.70	N	L	2.15	S	M	1.62	N W	H	1.50	N	L
21	3.55	S	M	3.20	S	M	2.70	Calm		2.12	S	M	1.72	S	H	1.60	S	M
22	3.50	Calm		3.10	N	M	2.68	S	L	2.00	N W	H	1.70	S W	H	1.60	S W	H
23	3.50	S	M	3.05	S	H	2.68	S	M	2.10	S	L	1.68	S W	M	1.45	N E	L
24	3.45	N	M	3.05	N	M	2.62	N	M	2.02	S W	M	1.65	S	M	1.45	S W	L
25	3.45	S	L	3.10	Calm		2.60	N	M	2.02	S	L	1.65	S	H	1.45	N	L
26	3.40	N W	M	3.00	N	M	2.60	N	M	2.00	S W	H	1.68	S	M	1.48	N	M
27	3.38	N	M	3.00	Calm		2.55	N	H	1.95	N W	H	1.60	N W	M	1.42	S	L
28	3.35	N	M	3.02	S	L	2.55	N	M	1.95	S	H	1.58	Calm		1.45	S	M
29	3.25	N	H	3.05	N	M	2.55	Calm		1.90	S W	L	1.55	S	M	1.42	S	M
30	3.28	N	L	3.15	S W	L	2.50	E	M	1.88	S W	M	1.58	S	L	1.50	S	H
31	3.30	S	L	3.05	N	L	......	....	....	1.85	S W	M	......	....	....	1.40	Calm	

L = Light. H = Heavy. M = Moderate.

ST. LAWRENCE RIVER DRAINAGE BELOW LAKE ONTARIO

ST. REGIS RIVER

DESCRIPTION

St. Regis river has its source in several small streams and lakes in the western part of Franklin county at an elevation of about 1,500 feet above the sea. It first flows in a northwesterly direction for about 40 miles and then somewhat east of north for about 28 miles to its mouth, in the St. Lawrence river near the state line. Its drainage area comprises 664 square miles (State Water Supply Commission).

The upper portion of its basin shed consists of swamp and of mountains from which most of the forest has been cut. Upon leaving the plateau the stream descends for 10 or 15 miles through a rugged country by a succession of steep rapids and precipitous falls to the lowlands bordering the St. Lawrence. Only a few of the excellent opportunities for developing power in the descent have as yet been utilized. From the foot of the hills to the St. Lawrence, the slope of the river is moderate and rock out-crop not frequent, consequently favorable sites for power plants are scarce.

ST. REGIS RIVER AT BRASHER CENTER

Location.—At the steel highway bridge in the village of Brasher Center, 5 miles downstream from Brasher Falls, 6¼ miles below the junction of east and west branches of St. Regis river and about 12 miles above the mouth.

Records available.—August 22, 1910, to December 31, 1914.

Drainage area.— 621 square miles. (Measured on Post Route map.)

Gage.— Chain, fastened to downstream side of bridge; read twice daily; datum unchanged.

Control.— Fairly permanent. Channel very rough; composed of gravel and large boulders.

Discharge measurements.—At low stages made by wading about 500 feet above the bridge; at high stages made from the bridge.

Winter flow.— Discharge relation affected by ice. Gage observations suspended during frozen period.

Accuracy.— Discharge rating curve well developed; estimate good.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of St. Regis River at Brasher Center

DATE		Made by	Gage height	Discharge
1914			*Feet*	*Sec.-ft.*
Feb.	23 *a*	C. S. De Golyer	6.08	339
April	17	C. S. De Golyer	5.87	3,120
	17	C. S. De Golyer	5.89	3,010
July	9 *b*	C. S. De Golyer	4.12	320
Oct.	14 *c*	C. S. De Golyer	3.97	200
	16 *c*	C. S. De Golyer	4.09	255
Nov.	16 *c*	C. S. De Golyer	4.475	575
	17 *c*	C. S. De Golyer	4.84	990
Dec.	18 *d*	Adams and De Golyer	5.66	346

a Backwater from ice. Measurement made through ice 500 feet above gage.
b Measurement made by wading 500 feet above gage.
c Measurement made by wading 500 feet above gage.
d Measurement made by wading 600 feet above gage.

Daily Gage Height, in Feet, of St. Regis River at Brasher Center

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.00	6.20	......	6.20	6.30	4.32	4.40	3.88	4.70	4.12	4.38	4.50
2	6.20	6.10	......	7.60	6.00	4.40	4.38	3.88	4.70	4.08	4.30	4.35
3	6.20	6.20	......	7.60	5.75	4.40	4.45	3.85	4.80	4.08	4.34	4.70
4	6.10	5.15	......	6.80	5.60	4.35	4.28	4.00	4.80	3.98	......	4.70
5	6.40	5.15	......	6.20	5.50	4.45	4.18	4.02	4.65	3.82	4.40	4.90
6	6.40	5.50	......	5.65	5.40	4.50	4.15	3.90	4.40	3.88	4.32	4.42
7	5.70	5.55	......	5.90	5.40	4.48	4.20	3.82	4.35	3.85	4.28	4.60
8	5.50	6.20	......	5.25	5.40	4.40	4.22	3.80	4.55	3.82	4.28	4.80
9	5.55	6.40	......	5.40	5.30	4.50	4.18	3.78	4.60	3.92	4.38	4.80
10	5.65	7.20	......	5.40	5.15	4.45	4.18	3.75	4.70	4.22	4.70	4.55
11	6.20	7.00	......	5.40	5.00	4.28	4.12	3.80	4.55	4.22	4.25	4.40
12	6.20	7.20	......	5.25	4.75	4.20	4.12	3.78	4.28	3.98	4.22	4.50
13	6.40	......	......	5.25	4.85	4.15	4.02	3.85	4.15	3.95	4.18	4.25
14	6.40	......	......	5.25	4.75	4.05	3.99	4.02	4.02	3.88	4.28	4.28
15	......	......	......	5.10	4.80	4.10	4.05	3.98	4.30	3.96	4.40	4.80
16	......	......	......	5.35	4.70	4.12	4.25	3.90	4.18	4.04	4.50	5.20
17	......	......	......	5.80	4.50	4.25	4.05	3.88	4.05	4.16	4.80	5.60
18	......	......	7.40	6.00	4.60	4.15	4.00	4.08	3.95	4.30	4.60	5.65
19	......	......	6.40	6.20	4.55	4.15	3.98	4.00	3.98	4.34	4.90	5.00
20	......	......	6.80	7.20	4.45	4.20	3.88	3.98	3.92	5.00	4.50	4.42
21	......	......	6.50	7.10	4.60	4.18	4.05	4.00	3.82	4.80	4.42	4.95
22	......	......	5.50	6.70	4.50	4.22	3.98	4.15	3.90	4.36	4.35	5.20
23	......	6.10	5.55	6.20	4.32	4.25	3.98	4.02	3.90	4.30	4.50	5.40
24	......	......	6.00	6.20	4.35	4.15	4.12	3.92	3.85	4.26	4.48	5.30
25	......	......	7.00	5.80	4.50	4.10	4.12	3.95	3.80	4.42	4.28	5.35
26	......	......	8.30	5.80	4.50	4.08	4.12	3.88	3.80	4.26	4.48	5.45
27	......	......	8.80	6.20	4.55	4.22	4.05	3.80	3.88	4.14	4.60	5.45
28	......	......	7.30	6.30	4.42	4.08	4.25	4.00	4.00	4.20	4.70	5.20
29	......	......	7.00	6.30	4.40	4.10	4.05	3.95	4.42	4.30	4.50	4.60
30	7.00	......	6.80	6.30	4.35	4.40	3.98	4.12	4.45	4.48	4.50	4.50
31	6.30	......	6.40	......	4.30	......	3.95	4.30	......	4.42	......	4.15

NOTE.— Discharge relation affected by ice from January 1 to March 27 and December 15 to 31, inclusive, and by backwater from ice jam, April 2 to 4.

Gage heights, October 15 to November 4, inclusive, computed from hourly values recorded by portable automatic gage.

Daily Discharge, in Second-feet, of St. Regis River at Brasher Center.

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	3,950	4,270	428	500	152	820	283	482	600
2	......	......	......	6,850	3,360	500	482	152	820	258	410	655
3	......	......	......	5,650	2,710	500	550	140	940	258	446	820
4	......	......	......	4,600	2,360	455	395	210	940	200	550	820
5	......	......	......	3,950	2,150	550	322	222	765	128	500	1,020
6	......	......	......	2,480	1,940	600	302	160	500	152	428	520
7	......	......	......	3,090	1,940	580	335	128	455	140	395	710
8	......	......	......	1,640	1,940	500	350	120	655	128	395	940
9	......	......	......	1,940	1,740	600	322	114	710	170	482	940
10	......	......	......	1,940	1,460	550	322	105	820	350	820	655
11	......	......	......	1,940	1,220	395	283	120	655	350	372	500
12	......	......	......	1,640	880	335	283	114	395	200	350	600
13	......	......	......	1,640	1,000	302	222	140	302	185	322	372
14	......	......	......	1,640	880	240	205	222	222	152	395	395
15	......	......	......	1,380	940	270	240	200	410	190	500	......
16	......	......	......	1,840	820	283	372	160	322	240	600	......
17	......	......	......	2,830	600	372	240	152	240	309	940	......
18	......	......	......	3,360	710	302	210	258	185	410	710	......
19	......	......	......	3,950	655	302	200	210	200	446	1,070	......
20	......	......	......	7,700	550	335	152	200	170	1,220	600	......
21	......	......	......	7,250	710	322	240	210	128	940	520	......
22	......	......	......	5,650	600	350	200	302	160	464	655	......
23	......	339	......	3,950	428	372	200	222	160	410	600	......
24	......	......	......	3,950	455	302	283	170	140	380	580	......
25	......	......	......	2,830	600	270	283	185	120	520	395	......
26	......	......	......	2,830	600	258	283	152	120	380	580	......
27	......	......	......	3,950	655	350	240	120	152	296	710	......
28	......	......	8,150	4,270	520	258	372	210	210	335	820	......
29	......	......	6,850	4,270	500	270	240	185	520	410	600	......
30	......	......	6,050	4,270	455	500	200	283	550	580	600	......
31	......	......	4,600	......	410	......	185	410	......	520	......	......
Mean	......	......	......	3,570	1,230	388	291	185	426	355	561	560

NOTE.— Daily discharge for periods of open water determined from well-defined rating curve. New rating curve was used, beginning March 28, 1914. Daily discharge, April 2 to 4, estimated by hydrograph study of backwater conditions.

Monthly Discharge of St. Regis River at Brasher Center.
[Drainage area, 621 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
April	7,700	1,380	3,570	5.75	6.42	B
May	4,270	410	1,230	1.98	2.28	A
June	600	240	388	0.625	0.70	A
July	550	152	291	0.469	0.54	B
August	410	105	185	0.298	0.34	B
September	940	120	426	0.686	0.77	A
October	1,220	128	355	0.572	0.66	B
November	1,070	322	561	0.903	1.01	B
December	1,070	....	560	0.902	1.04	B

NOTE.— Mean discharge, December 15 to 31, estimated, 495 second-feet.

DEER RIVER, FRANKLIN COUNTY

DESCRIPTION

Deer river is the principal tributary of the St. Regis. Rising in the central part of Franklin county at an elevation of about 1,500 feet above the sea, it flows in a general northwesterly direction, entering the St. Regis near Helena, N. Y. The river has an average slope of about 10 feet per mile up to North Lawrence. From North Lawrence to Tebo it has an average slope of 61 feet per mile. In this stretch the river drops 767 feet in 12½ miles. Probably 60 per cent of this fall would be attractive for power development, if some means were provided for regulating the flow of the stream. The country above Tebo is wild and there are no maps with requisite data to show storage possibilities in this region.

DEER RIVER AT BRASHER IRON WORKS

Location.—About 1,000 feet below steel highway bridge in the village of Brasher Iron Works (railroad station is Ironton) and 2 miles above the confluence of Deer river with St. Regis river in Helena, N. Y. No important tributaries enter between the gage and the mouth of the river. A small creek enters from the left about 1 mile above the station.

Records available.— July 25, 1912, to December 31, 1914.

Drainage area.— 206 square miles. (Measured on Post Route map.)

Gage.— Sloping staff gage, 32 feet long, graduated from 0.5 to 11.0 feet.

Control.— Gravel about 300 feet below the gage; probably permanent. The stream bed at the bridge is solid rock and smooth.

Discharge measurements.— During medium and high stages made from the bridge; at low stages made by wading a short distance above.

Winter flow.— Discharge relation seriously affected by ice during the winter months. Gage observations suspended during this period.

Accuracy.— Rating curve fairly well defined.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurement of Deer River at Brasher Iron Works

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
July 9 *a*	C. S. De Golyer	1.36	73

a Measurement made by wading 300 feet above gage.

Daily Gage Height, in Feet, of Deer River at Brasher Iron Works

1914	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	3.70	3.30	1.22	1.48	1.08	1.65	1.18	1.70	1.65
2	......	4.20	3.00	1.32	1.45	1.05	1.82	1.18	1.60	1.90
3	......	3.30	2.60	1.35	1.40	1.08	1.78	1.30	1.60	2.35
4	......	2.80	2.40	1.38	1.40	0.95	1.65	1.18	1.65	2.10
5	......	2.75	2.45	1.40	1.35	1.09	1.52	1.08	1.60	2.00
6	......	2.60	2.35	1.40	1.40	1.05	1.32	1.00	1.55	1.90
7	......	2.40	2.30	1.20	1.32	1.02	1.42	1.08	1.60	1.90
8	......	2.70	2.20	1.25	1.48	1.02	1.65	1.12	1.60	1.70
9	......	3.60	2.10	1.31	1.38	0.92	1.60	1.12	1.60	1.60
10	......	3.20	2.50	1.31	1.31	0.95	1.55	1.18	1.50	1.50
11	......	3.20	1.88	1.24	1.21	0.95	1.48	1.26	1.45	1.50
12	......	3.20	1.82	1.31	1.15	1.10	1.45	1.18	1.45	1.50
13	......	2.60	1.78	1.30	1.14	1.12	1.45	1.08	1.60	1.30
14	......	2.55	1.80	1.20	1.02	1.10	1.28	1.26	1.80	1.70
15	......	2.20	1.78	1.09	1.09	1.14	1.28	1.22	1.65	1.80
16	......	3.30	1.65	0.98	1.10	1.16	1.32	1.32	1.80	2.00
17	......	3.70	1.65	1.19	1.10	1.25	1.28	1.55	1.65	1.95
18	......	3.40	1.52	1.28	1.05	1.25	1.15	1.65	1.80	2.00
19	......	3.70	1.55	1.25	1.02	1.20	1.10	1.70	1.90	1.90
20	......	4.50	1.46	1.20	1.05	1.15	1.12	1.80	1.70	1.80
21	......	4.60	1.44	1.18	0.92	1.35	1.05	1.75	1.80	1.70
22	2.35	3.90	1.41	1.11	0.90	1.25	0.98	1.60	1.70	1.80
23	2.30	3.40	1.42	1.22	1.08	1.20	1.20	1.50	1.90	1.80
24	2.10	3.00	1.40	1.26	1.22	1.12	1.30	1.42	1.70	1.80
25	2.05	2.85	1.38	1.32	1.16	1.00	1.15	1.42	1.60	1.80
26	5.80	3.20	1.46	1.25	1.10	1.10	1.22	1.35	1.80	1.70
27	7.80	3.90	1.32	1.12	1.08	1.08	1.28	1.40	2.05	1.50
28	4.60	3.40	1.40	1.00	1.08	1.05	1.20	1.30	1.80	1.45
29	4.20	3.50	1.38	1.15	1.10	1.16	1.25	1.38	1.70	1.70
30	3.70	4.00	1.25	1.46	1.09	1.40	1.20	1.48	1.60	1.90
31	3.40	......	1.24	......	1.08	1.52	......	1.60	......	2.45

NOTE.— Discharge relation affected by ice, January 1 to March 21 and December 14 to 31, nclusive.

Daily Discharge, in Second-feet, of Deer River at Brasher Iron Works

1914	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	864	656	61	96	44	124	56	133	124
2	......	1,190	524	74	92	40	157	56	115	175
3	......	656	375	78	85	44	149	71	115	294
4	......	446	309	82	85	30	124	56	124	225
5	......	428	325	85	78	45	102	44	115	199
6	......	375	294	85	85	40	74	35	107	175
7	......	309	279	58	74	37	88	44	115	175
8	......	410	251	64	96	37	124	48	115	133
9	......	808	225	72	82	27	115	48	115	115
10	......	610	341	72	72	30	107	56	99	99
11	......	610	171	63	59	30	96	66	92	99
12	......	610	157	72	52	46	92	56	92	99
13	......	375	149	71	51	48	92	44	115	71
14	......	358	153	58	37	46	68	66	153	......
15	......	251	149	45	45	51	68	61	124	......
16	......	656	124	33	46	53	74	74	153	......
17	......	864	124	57	46	64	68	107	124	......
18	......	704	102	68	40	64	52	124	153	......
19	......	864	107	64	37	58	46	133	175	......
20	......	1,420	93	58	40	52	48	153	133	......
21	......	1,500	91	56	27	78	41	143	153	......
22	294	980	86	47	25	64	33	115	133	......
23	279	704	88	61	44	58	58	99	175	......
24	225	524	85	66	61	48	71	88	133	......
25	212	465	82	74	53	35	52	88	115	......
26	2,810	610	93	64	46	46	61	78	153	......
27	......	980	74	48	44	44	68	85	212	......
28	1,500	704	85	35	44	40	58	71	153	......
29	1,190	754	82	52	46	53	64	82	133	......
30	864	1,050	64	93	45	85	58	96	115	......
31	704	......	63	......	44	102	......	115	......	......
Mean	......	703	187	63.9	57.3	49.6	81.1	79.3	131	128

NOTE.— Daily discharge determined from a rating curve that is well defined below 3,500 second-feet.

Monthly Discharge of Deer River at Brasher Iron Works
[Drainage area, 206 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
April	1,500	251	703	3.41	3.80	A
May	656	63	187	0.908	1.05	A
June	93	33	63.9	0.310	0.34	B
July	96	25	57.3	0.278	0.32	B
August	102	27	49.6	0.241	0.28	B
September	157	33	81.1	0.394	0.44	B
October	153	35	79.3	0.385	0.44	B
November	212	92	131	0.636	0.71	B
December	294	....	128	0.621	0.72	C

NOTE.— Mean discharge, December 14 to 31, estimated, 109 second-feet.

RAQUETTE RIVER

DESCRIPTION

Raquette river rises in northern Hamilton county, flows almost north through a long narrow valley to St. Lawrence river. Its total length from its source to its confluence with the St. Lawrence, near the most northern point of the state, is 162 miles. The drainage area at the mouth of the river is 1,269 square miles.

Its source is on an elevated plateau about 1,600 feet above sea level. The upper part of the basin includes many acres of swamp land, as well as a large area of lakes and ponds, including Tupper lake, Little Tupper lake, Long lake, Round lake, Blue Mountain lake, Forked lake and Raquette lake.

The high region receives a heavy rainfall, the mean annual amounting to about forty-eight inches, or about ten inches above the mean for the state.

The course of the river through the mountains is marked by many falls and rapids, but as yet only 400 feet of the 1,400 feet of fall in the river below Tupper lake has been developed. The river is characterized by tremendous fluctuations between the maximum and minimum flow and is in great need of artificial regulation if the possibilities of power development are to be fully realized.

RAQUETTE RIVER AT MASSENA SPRINGS

Location.—At concrete highway bridge at Massena Springs, 8 miles below Raymondville and 10 miles above the mouth of the stream.

Records available.— September 21 to October 17, 1903, and April 9, 1904, to December 31, 1914.

Drainage area.— 1,200 square miles.

Gage.— Original gage was a vertical staff fastened to a stone wall on the left bank about 50 feet upstream from the present bridge. This was replaced by a standard chain gage on August 16, 1906, fastened to an old highway bridge located just above the present bridge. The datum of the chain gage was set 1.00 foot lower than that of the staff gage to prevent negative gage heights. On February 2, 1912, the chain gage was reset on the present concrete bridge at such a datum that readings should be comparable with those at the former location.

Channel.— Fairly permanent; bed of river of coarse gravel and small boulders.

Discharge measurements.— Made from bridge.

Regulation.— The operation of a number of power plants above the station has marked effect on the low-water discharge of the stream. These plants are usually run for 24-hour power, but are closed on Sundays. The effect of the Sunday closing is shown in the stream for several days.

Winter flow.— Discharge relation affected by ice. Gage observation suspended during frozen period.

Accuracy.— Determinations of discharge for low-water periods may be considerably in error as a result of regulation of flow.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Raquette River at Massena Springs

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
April 16	C. S. De Golyer	5.96	3,930
Aug. 27 *a*	H. W. Fear	1.37	280
Oct. 16	C. S. De Golyer and V. McDonald	1.78	436

a Left channel measured from downstream side of bridge; right channel measured by wading under center of bridge.

Daily Gage Height, in Feet, of Raquette River at Massena Springs

1914	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.10	9.50	5.20	2.25	2.35	3.20	2.15	1.50	2.40
2	9.00	9.10	5.90	2.30	2.00	2.60	2.70	1.25	3.10
3	7.80	9.00	4.70	2.35	2.60	2.80	1.65	2.40	2.40
4	9.10	8.80	4.20	1.80	2.10	1.95	1.45	2.05	2.50
5	8.20	9.60	3.90	1.40	1.80	2.45	1.80	2.30	2.80
6	......	8.40	4.40	1.95	1.40	3.30	2.60	1.80	3.10
7	......	8.00	3.70	2.50	1.85	2.70	2.05	1.50	3.30
8	......	7.90	3.50	2.30	1.75	2.40	2.60	2.10	4.20
9	......	8.60	3.20	2.70	2.00	3.10	2.15	0.85	5.40
10	......	8.10	3.40	2.00	2.30	3.60	3.50	2.60	6.00
11	......	7.80	3.30	2.40	2.60	1.65	2.70	1.40	6.10
12	......	9.00	3.10	2.15	1.65	2.90	1.95	2.40	5.90
13	......	9.20	3.00	1.60	1.60	3.00	2.15	1.60	5.20
14	......	7.60	3.00	1.60	1.75	2.15	1.75	1.95	6.00
15	......	6.90	3.70	1.70	1.70	2.25	1.60	2.20	6.00
16	6.20	6.50	2.80	2.50	1.95	2.15	2.00	2.90	5.50
17	7.40	6.30	3.30	1.90	1.90	2.40	1.70	2.40	5.90
18	6.40	6.40	3.00	1.90	1.80	1.45	1.65	2.70	4.70
19	7.50	7.60	2.40	1.75	1.60	2.10	1.55	2.50	5.60
20	7.00	6.40	3.90	1.95	1.60	2.60	1.60	2.80	5.40
21	7.80	6.20	3.40	1.95	2.20	2.15	1.55	2.70	6.50
22	7.30	6.00	2.60	1.75	1.80	1.45	1.60	2.40	6.90
23	9.00	5.60	2.80	2.50	1.40	1.70	2.20	2.10	7.30
24	7.90	5.80	2.05	1.60	1.80	1.85	1.80	2.10	7.10
25	9.40	4.80	2.40	2.30	2.20	2.15	2.70	3.40	7.80
26	8.70	4.90	2.40	1.65	2.50	2.90	1.45	2.60	8.60
27	9.10	5.60	2.40	1.85	1.80	3.00	2.15	2.20	......
28	9.10	5.70	2.00	1.95	2.15	1.30	2.40	2.50	......
29	8.80	4.80	1.40	1.90	2.60	1.95	1.70	2.05	......
30	8.90	5.40	2.25	1.75	1.45	1.50	1.90	1.50	......
31	......	5.40	......	2.20	1.95	......	2.00	......	......

NOTE.— Discharge relation affected by ice, January 1 to March 31 and from about December 6 to 31, inclusive.

Daily Discharge, in Second-feet, of Raquette River at Massena Springs

1914	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8,200	8,800	3,100	662	712	1,280	610	325	745
2	8,050	8,200	3,870	690	535	865	930	245	1,210
3	6,315	8,050	2,590	712	865	1,000	385	745	745
4	8,200	7,750	2,110	445	585	512	308	560	805
5	6,870	8,960	1,840	290	445	775	445	690	1,000
6	......	7,160	2,290	512	290	1,350	865	445	......
7	......	6,590	1,660	805	468	930	560	325	......
8	......	6,450	1,580	690	425	745	865	585	......
9	......	7,450	1,280	930	535	1,210	610	135	......
10	......	6,730	1,420	535	690	1,580	1,500	865	......
11	......	6,320	1,350	745	865	385	930	290	......
12	......	8,050	1,210	610	385	1,070	512	745	......
13	......	8,350	1,140	365	365	1,140	610	365	......
14	......	6,040	1,140	365	425	610	425	512	......
15	......	5,110	1,660	405	405	662	365	635	......
16	4,230	4,590	1,000	805	512	610	535	1,070	......
17	5,780	4,350	1,350	490	490	745	405	745	......
18	4,470	4,470	1,140	490	445	307	385	930	......
19	5,910	6,040	745	425	365	585	345	805	......
20	5,240	4,470	1,840	512	365	865	365	1,000	......
21	6,320	4,230	1,420	512	635	610	345	930	......
22	5,640	3,990	865	425	445	307	365	745	......
23	8,050	3,540	1,000	805	290	405	635	585	......
24	6,450	3,760	560	365	445	468	445	585	......
25	8,650	2,690	745	690	635	610	930	1,420	......
26	7,600	2,790	745	385	805	1,070	308	865	......
27	8,200	3,540	745	468	445	1,140	610	635	......
28	8,200	3,650	535	512	610	260	745	805	......
29	7,750	2,690	290	490	865	512	405	560	......
30	7,900	3,320	662	425	307	325	490	325	......
31	......	3,320	......	635	512	......	535	......	......
Mean	6,440	5,530	1,400	555	521	764	573	649	1,390

NOTE.— Daily discharge determined from a rating curve that is fairly well defined. New rating curve used, beginning April 1, 1914.

Monthly Discharge of Raquette River at Massena Springs
[Drainage area, 1,200 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile*	Depth in inches on drainage area*	
April	8,650	4,230	6,440	5.37	5.99	B
May	8,960	2,690	5,530	4.61	5.31	B
June	3,870	290	1,400	1.17	1.30	B
July	930	365	555	0.462	0.53	C
August	865	290	521	0.434	0.50	C
September	1,580	260	764	0.637	0.71	C
October	1,500	308	573	0.478	0.55	C
November	1,420	135	649	0.541	0.60	C
December	....	....	1,390	1.16	1.34	D

NOTE.— Mean discharge estimated by comparison with records at Piercefield as follows: April 6 to 15, 5,510 second-feet; December 6 to 31, 1,480 second-feet.

* These columns from April to September, inclusive, revised by Department of State Engineer and Surveyor for new determination of drainage area (old drainage area, 1,170 square miles).

RAQUETTE RIVER AT PIERCEFIELD

Location.—About three-fourths mile above the head of Black rapids and one-half mile below the dam of the International Paper Company at Piercefield.

Records available.—August 20, 1908, to December 31, 1914.

Drainage area.— 723 square miles. (All but 16 square miles measured on U. S. Geological Survey topographic sheets.)

Gage.—August 20, 1908, to September 3, 1910, vertical staff fastened to a large pine stump. September 4 to December 31, 1910, chain gage fastened to same stump and having the same datum. January 1, 1911, to December 31, 1912, same chain gage with its datum 2 feet lower. During 1912 an automatic recording gage was installed in a galvanized sheet-iron house 4 feet by 6 feet inside dimensions, over a concrete well 3½ feet square inside dimensions and 15 feet deep. The well is connected with the river by a 4-inch cast-iron pipe 60 feet long. A shear gate valve is set at the inner end of the pipe for use in cleaning the well. The outer end of the pipe terminates in a concrete box 1 foot square, inside dimensions. This box is connected with the river by three small intake pipes 2 inches in diameter with a screen protection over their outer ends. This special construction was deemed necessary to keep wood pulp out of the intake pipe.

Control.— Head of Black rapids; the channel opposite the gage is a deep pond having no perceptible velocity.

Discharge measurements.—Made from a cable just above Black rapids at the section formerly used for boat measurements.

Winter flow.— Rapids, forming control, rarely freeze and measurements made with ice present indicate that the relation between discharge relation is little, if any, affected by ice. Open water discharge rating curve usually applicable throughout the year.

Regulation.— Low-water flow controlled by dam of the International Paper Company.The numerous lakes in the upper part of the drainage basin afford considerable storage, most of which is controlled.

Accuracy.— Rating curve well defined. With fluctuations, due to regulation recorded by automatic gage, estimates are very good.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Raquette River at Piercefield

DATE		Made by	Gage height	Discharge
	1914		*Feet*	*Sec.-ft.*
Jan.	20	W. S. Easterly	4.40	601
	23	W. S. Easterly	4.24	568
Feb.	24	C. S. De Golyer	4.08	482
April	20	C. S. De Golyer	8.87	3,890
	20	C. S. De Golyer	8.57	3,590
June	17	R. S. Barnes	5.20	942
July	10	C. S. De Golyer	4.24	548
	10	C. S. De Golyer	4.24	554
Oct.	20	C. S. De Golyer	4.18	520
Nov.	8	C. S. De Golyer	2.11	77.5
	15	C. S. De Golyer	2.40	121
	15	C. S. De Golyer	2.30	127

Daily Gage Height, in Feet, of Raquette River at Piercefield

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.
1	5.05	3.20	2.88	5.85	11.10	6.25	......	......	......
2	4.95	4.20	4.15	6.20	11.10	6.25	......	2.45	......
3	4.95	4.20	4.25	6.30	11.00	6.10	......	......	3.80
4	3.37	4.30	4.20	6.40	11.00	5.85	......	......	......
5	4.25	4.20	4.20	6.05	10.80	5.40	......	......	......
6	4.65	4.30	4.25	6.70	10.60	5.35	......	......	2.10
7	4.95	4.30	4.20	6.70	10.40	3.50	......	4.15	......
8	4.90	3.50	2.91	6.80	10.20	5.05	......	......	......
9	5.05	3.85	3.85	6.95	10.10	5.35	......	2.10	......
10	5.00	4.40	3.95	7.20	......	5.15	4.20	......	4.00
11	3.65	4.05	3.70	7.30	......	5.10	4.00	......	......
12	3.75	......	3.85	7.00	9.40	4.85	2.30	......	......
13	5.05	......	4.20	7.50	9.30	5.00	4.20	......	2.50
14	......	......	4.20	7.50	9.00	3.00	4.20	......	......
15	......	2.44	3.55	7.50	8.80	4.15	4.20	......	......
16	......	4.00	3.45	7.50	8.60	4.85	4.20	2.40	......
17	......	4.25	4.25	7.60	8.30	4.85	4.20	......	4.40
18	......	4.30	4.35	7.70	8.30	4.65	4.15	4.35	......
19	......	4.15	4.35	8.00	8.10	4.50	2.58	......	......
20	4.25	4.15	4.40	8.80	7.90	4.35	3.65	......	2.40
21	4.20	4.20	4.25	9.30	7.80	3.00	4.05	......	......
22	4.25	3.45	3.15	9.70	7.60	3.65	3.95	......	......
23	4.25	3.60	......	10.10	7.50	4.30	3.95	2.15	......
24	4.25	4.25	......	10.40	7.30	4.15	4.05	......	4.35
25	2.96	4.30	......	10.60	7.40	3.95	4.15	......	......
26	3.70	4.15	......	10.80	7.20	3.85	2.25	......	......
27	4.25	4.25	......	10.70	7.00	3.90	......	3.70	......
28	4.30	3.85	......	10.70	6.90	2.52	......	......	3.40
29	4.25	......	4.30	10.80	6.75	3.49	......	......	4.05
30	4.30	......	5.30	11.00	6.55	4.15	......	2.05	3.95
31	4.25	......	5.60	......	6.10	......	4.15	......	......

NOTE.— Discharge relation affected by ice. Automatic gage not in operation, July 26 to September 27, inclusive. Gage heights computed from mean of 24 hourly gage heights for each day while the automatic gage was in operation. Gage height given between July 26 and September 27 are single observations and not necessarily means for each day. October to December, inclusive, automatic gage record, mean gage heights not computed.

Daily Discharge, in Second-feet, of Raquette River at Piercefield

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	849	250	193	1,230	6,430	1,480	515	......	......	504	80	791
2	807	530	513	1,440	6,430	1,480	520	......	......	522	202	806
3	807	530	547	1,510	6,310	1,380	525	......	402	500	365	956
4	287	564	530	1,580	6,310	1,230	......	......	......	212	350	975
5	547	530	530	1,350	6,080	1,000	......	......	......	316	398	1,010
6	689	564	547	1,810	5,850	982	530	......	......	486	382	624
7	807	564	530	1,810	5,620	318	530	513	......	436	378	1,010
8	786	318	198	1,890	5,390	849	530	......	......	364	204	1,090
9	849	417	417	2,010	5,280	982	530	......	......	330	334	1,060
10	828	598	448	2,230	5,020	892	530	......	464	348	422	1,060
11	358	480	372	2,320	4,750	870	464	......	......	179	396	1,070
12	387	......	417	2,060	4,490	766	115	......	......	239	386	1,080
13	849	......	530	2,510	4,380	828	530	......	......	334	379	598
14	......	......	530	2,510	4,050	212	530	......	......	345	396	936
15	......	131	331	2,510	3,840	513	530	......	......	340	199	1,050
16	......	464	306	2,510	3,620	766	530	......	......	180	285	1,040
17	......	547	547	2,610	3,310	766	530	......	598	164	416	1,110
18	......	564	581	2,710	3,310	689	513	581	......	121	413	1,030
19	......	518	581	3,010	3,110	634	148	......	......	262	410	1,030
20	547	518	598	3,840	2,910	581	358	......	......	447	444	792
21	530	530	547	4,380	2,810	212	480	......	......	454	698	796
22	547	306	240	4,820	2,610	358	448	......	......	470	318	1,070
23	547	344	......	5,280	2,510	564	448	......	......	494	526	1,030
24	547	547	......	5,620	2,320	513	480	......	581	210	718	815
25	206	564	......	5,850	2,420	448	513	......	......	68	700	375
26	372	518	......	6,080	2,230	417	......	......	......	262	693	400
27	547	547	......	5,960	2,060	432	......	372	......	450	771	450
28	564	417	......	5,960	1,970	141	......	......	294	480	651	988
29	547	......	564	6,080	1,850	316	......	......	480	453	235	943
30	564	......	960	6,310	1,690	513	......	......	448	386	561	866
31	547	......	1,100	......	1,380	......	518	......	......	308	......	883
Mean	599	474	520	3,330	3,880	704	446	431	448	344	424	893

NOTE.— Daily discharge determined from a well-defined rating curve. Daily discharge, May 10 and 11, July 1 to 3 and December 26 and 27, estimated by interpolation. New rating curve used, beginning January 1, 1914. Discharge for October to December, inclusive, determined by integration.

Monthly Discharge of Raquette River at Piercefield

[Drainage area, 723 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January	849	206	599	0.828	0.95	B
February	598	131	474	0.656	0.68	B
March	1,100	193	520	0.720	0.83	B
April	6,310	1,230	3,330	4.610	5.14	A
May	6,430	1,380	3,880	5.370	6.19	A
June	1,480	141	704	0.974	1.09	A
July	....	....	446	0.617	0.71	B
August	....	....	431	0.596	0.69	C
September	....	....	448	0.620	0.69	C
October	522	68	344	0.476	0.55	A
November	771	80	424	0.586	0.65	A
December	1,110	375	893	1.240	1.43	A
The year	6,430	68	1,044	1.440	19.60	.....

NOTE.— Mean discharge for period estimated as follows: January 14 to 19, 607 second-feet; February 12 to 14, 475 second-feet; March 23 to 28, 575 second-feet; July 4 and 5, 132 second-feet; July 26 to 30, 442 second-feet; September 1 to 27, 452 second-feet. Estimates indicate the flow as regulated by the dam and numerous lakes immediately above the station.

OSWEGATCHIE RIVER

DESCRIPTION

Oswegatchie river rises in Cranberry lake and the mountains to the southwest in St. Lawrence and Jefferson counties, whence it flows in a general northerly direction into the St. Lawrence river at Ogdensburg, where its drainage area is 1,609 square miles. The river is formed by the junction of the east branch of Oswegatchie river and the west branch of the Oswegatchie river at Talcville and its main tributary below this point is Indian river, which flows through Black lake. Considerable power is developed along all three of these main tributaries and many of the power sites in the lower reaches of the river have also been developed.

On the east branch of Oswegatchie river there are two important storage sites, one at Cranberry Lake and the other at Newton Falls.

OSWEGATCHIE RIVER NEAR OGDENSBURG

Location.—At the steel highway bridge known locally as Eel Weir bridge, about 1 mile below the mouth of the outlet of Black lake and 5½ miles above the city of Ogdensburg and the mouth of the river.

Records available.—April 22, 1903, to December 31, 1914.

Drainage area.— 1,580 square miles. (From U. S. Geological Survey water supply papers.)

Gage.— Chain, fastened to the upstream side of the bridge; read once daily; datum unchanged.

Control.— Practically permanent. Channel rocky and partly artificial, the rock having been removed underneath the bridge by blasting to increase the bridge opening.

Discharge measurements.— Usually made from the bridge.

Regulation.— Two dams in the vicinity of the gage; one at Heuvelton, about 5 miles above, and one at Rensselaer Falls, 10 miles above.

Winter flow.— Discharge relation not affected by ice.

Accuracy.— Rating curve fairly well developed; open-water curve used throughout the year.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Oswegatchie River near Ogdensburg

DATE		Made by	Gage height	Discharge
1914			*Feet*	*Sec.-ft.*
Feb.	21 *a*	C. S. De Golyer	5.07	1,230
April	15 *b*	C. S. De Golyer	7.18	6,230
	15 *b*	C. S. De Golyer	7.15	6,180
	18 *b*	C. S. De Golyer	7.37	6,700
Aug.	25 *c*	H. W. Fear	4.70	584
Oct.	17 *d*	C. S. De Golyer	4.60	456

a Measurement made from downstream side of bridge.
b Measurement made from upstream side of bridge.
c Measurement made by wading 10 feet above gage.
d Measurement made by wading 75 feet above gage.

Daily Gage Height, in Feet, of Oswegatchie River near Ogdensburg

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.40	6.60	4.80	8.4	7.10	4.95	4.80	4.70	4.75	4.62	4.90	5.15
2	5.35	6.40	4.80	8.6	7.10	4.90	4.80	4.75	4.75	4.70	4.78	5.20
3	5.30	6.40	4.85	8.8	7.10	4.95	4.85	4.70	4.92	4.70	4.70	5.20
4	5.20	6.40	4.90	8.9	7.00	4.85	4.90	4.70	4.90	4.68	4.70	5.25
5	5.10	6.60	4.90	8.9	6.80	4.90	4.90	4.70	4.90	4.60	4.65	5.30
6	5.10	6.60	4.80	8.6	6.70	4.90	5.00	4.70	5.05	4.50	4.68	5.60
7	5.10	6.40	4.80	8.4	6.60	4.90	5.00	4.70	4.92	4.60	4.68	5.60
8	5.10	6.50	4.85	8.0	6.40	4.95	5.00	4.60	4.90	4.65	4.68	5.60
9	5.10	6.40	4.90	8.0	6.40	4.90	5.00	4.60	4.90	4.65	4.68	5.10
10	5.10	6.20	4.85	7.8	6.30	5.00	5.00	4.55	4.90	4.62	4.70	5.55
11	5.10	6.00	4.80	7.6	6.20	5.00	5.00	4.50	4.90	4.88	4.80	5.50
12	5.10	6.00	4.80	7.6	6.00	5.00	5.00	4.50	4.90	4.70	4.75	5.45
13	5.10	6.00	4.80	7.6	6.10	5.00	4.95	4.50	4.90	4.70	4.95	5.30
14	5.10	5.90	4.80	7.5	6.00	5.00	5.00	4.50	4.90	4.58	4.75	5.30
15	5.10	5.85	4.80	7.5	5.70	5.00	5.00	4.50	4.90	4.60	4.75	5.20
16	5.10	5.70	5.15	7.4	5.70	5.00	5.00	4.50	4.82	4.60	5.15	5.15
17	5.00	5.65	5.35	7.3	5.75	4.95	4.95	4.50	4.80	4.60	5.05	5.10
18	5.00	5.45	5.60	7.3	5.65	4.90	5.00	4.50	4.80	5.05	4.85	5.10
19	5.00	5.35	5.85	7.5	5.50	4.90	5.00	4.50	4.78	4.62	4.95	5.00
20	5.00	5.30	6.00	7.5	5.50	4.90	4.90	4.60	4.70	4.65	5.00	4.92
21	5.00	5.15	6.20	7.6	5.40	4.90	4.80	4.60	4.70	4.65	4.95	4.90
22	5.00	5.00	6.20	7.5	5.40	4.80	4.80	4.60	4.70	4.62	5.00	5.00
23	5.00	5.00	6.10	7.4	5.25	4.85	4.80	4.60	4.72	4.65	5.00	4.92
24	5.00	5.00	5.90	7.4	5.20	4.85	4.80	4.60	4.70	4.68	5.00	4.90
25	4.95	4.95	5.80	7.4	5.20	4.80	4.80	4.60	4.70	4.78	5.05	4.90
26	4.90	4.90	5.90	7.3	5.40	4.70	4.80	4.65	4.70	4.82	5.00	4.90
27	4.90	4.90	6.80	7.2	5.25	4.65	4.80	4.65	4.65	4.80	4.95	4.85
28	4.90	4.85	7.20	7.1	5.10	4.70	4.80	4.60	4.65	4.95	5.00	4.85
29	4.95	......	7.80	7.0	5.20	4.90	4.70	4.60	4.62	4.70	5.00	4.85
30	5.40	......	8.20	7.1	5.20	4.80	4.75	4.70	4.60	4.72	5.10	4.80
31	6.40	......	8.20	......	5.20	......	4.70	4.75	......	4.80	......	......

NOTE.— Discharge relation probably not materially affected by ice.

Daily Discharge, in Second-feet, of Oswegatchie River near Ogdensburg

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	1,450	4,620	750	9,900	6,000	1,010	750	590	670	478	920	1,380
2.....	1,370	4,100	750	10,500	6,000	920	750	670	670	590	718	1,480
3.....	1,290	4,100	835	11,100	6,000	1,010	835	590	956	590	590	1,480
4.....	1,140	4,100	920	11,400	5,720	835	920	590	920	562	590	1,580
5.....	990	4,620	920	11,400	5,160	920	920	590	920	450	520	1,670
6.....	990	4,620	750	10,500	4,880	920	1,100	590	1,200	330	562	2,280
7.....	990	4,100	750	9,900	4,620	920	1,100	590	956	450	562	2,280
8.....	990	4,360	835	8,700	4,100	1,010	1,100	450	920	520	562	2,280
9.....	990	4,100	920	8,700	4,100	920	1,100	450	920	520	562	1,290
10.....	990	3,600	835	8,100	3,840	1,100	1,100	390	920	478	590	2,180
11.....	990	3,140	750	7,500	3,600	1,100	1,100	330	920	886	750	2,070
12.....	990	3,140	750	7,500	3,140	1,100	1,100	330	920	590	670	1,970
13.....	990	3,140	750	7,500	3,360	1,100	1,010	330	920	590	1,010	1,670
14.....	990	2,920	750	7,200	3,140	1,100	1,100	330	920	426	670	1,670
15.....	990	2,810	750	7,200	2,490	1,100	1,100	330	920	450	670	1,480
16.....	990	2,490	1,380	6,900	2,490	1,100	1,100	330	784	450	1,380	1,380
17.....	850	2,380	1,770	6,600	2,600	1,010	1,010	330	750	450	1,200	1,290
18.....	850	1,970	2,280	6,600	2,380	920	1,100	330	750	1,200	835	1,290
19.....	850	1,770	2,810	7,200	2,070	920	1,100	330	718	478	1,010	1,100
20.....	850	1,670	3,140	7,200	2,070	920	920	450	590	520	1,100	956
21.....	850	1,380	3,600	7,500	1,870	920	750	450	590	520	1,010	920
22.....	850	1,100	3,600	7,200	1,870	750	750	450	590	478	1,100	1,100
23.....	850	1,100	3,360	6,900	1,580	835	750	450	622	520	1,100	956
24.....	850	1,100	2,920	6,900	1,480	835	750	450	590	562	1,100	920
25.....	785	1,010	2,700	6,900	1,480	750	750	450	590	718	1,200	920
26.....	720	920	2,920	6,600	1,870	590	750	520	590	784	1,100	920
27.....	720	920	5,160	6,300	1,580	520	750	520	520	750	1,010	835
28.....	720	835	6,300	6,000	1,290	590	750	450	520	1,010	1,100	835
29.....	785	......	8,100	5,720	1,480	920	590	450	478	590	1,100	835
30.....	1,450	......	9,300	6,000	1,480	750	670	590	450	622	1,290	835
31.....	3,440	......	9,300	......	1,480	......	590	670	......	750	......	750
Mean...	1,050	2,720	2,600	7,920	3,070	913	909	464	759	591	886	1,370

NOTE.— Daily discharge determined from rating curve which is somewhat uncertain. A new rating curve used, beginning February 1, 1914.

Monthly Discharge of Oswegatchie River near Ogdensburg
[Drainage area, 1,580 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January....................	3,440	720	1,050	0.665	0.77	B
February....................	4,620	835	2,720	1.72	1.79	C
March....................	9,300	750	2,600	1.65	1.90	B
April....................	11,400	5,720	7,920	5.01	5.59	B
May....................	6,000	1,290	3,070	1.94	2.24	B
June....................	1,100	520	913	0.578	0.64	C
July....................	1,100	590	909	0.575	0.66	C
August....................	670	330	464	0.294	0.34	C
September....................	1,200	450	759	0.480	0.54	C
October....................	1,200	330	591	0.374	0.43	C
November....................	1,380	520	886	0.561	0.62	C
December....................	2,280	750	1,370	0.867	1.00	C
The year....................	11,400	330	1,923	1.22	16.52	

NOTE.— Seasonable distribution of flow somewhat affected by the operation of the storage reservoir at Cranberry lake.

EAST BRANCH OF OSWEGATCHIE RIVER AT NEWTON FALLS

Location.— 600 feet below the lower dam of the Newton Falls Paper Company in the village of Newton Falls; 4 miles above the mouth of the Little river and 10 miles below the outlet of Cranberry lake.

Records available.— October 6, 1912, to December 31, 1914.

Drainage area.— 166 square miles.

Gage.— Vertical staff gage, read twice daily.

Control.— Bottom consists of small boulders and gravel, covered with waste from the pulp mill.

Discharge measurements.— Made by wading at low stages and from a cable 30 feet above the gage during high water.

Winter flow.— Ice effect is diminished by the disturbance of the water at the paper mill.

Regulation.— The dams of the paper mill cause some daily fluctuation, probably not enough to affect the accuracy of the records. Seasonal flow is largely controlled by dam at Cranberry lake. Range of gage heights probably not more than 5 feet.

Accuracy.— Discharge curve well defined for ordinary stages. No highwater measurements have yet been made. Estimates good.

Coöperation.— Gage heights obtained through the coöperation of the Newton Falls Paper Company. Discharge computation by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of East Branch of Oswegatchie River at Newton Falls

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Aug. 28	O. W. Hartwell	1.91	289.0
29 *a*	H. W. Fear	0.20	36.7
Dec. 19 *b*	R. M. Adams	2.19	3.77

a Measurement made by wading at regular section.
b Measurement made by wading 50 feet above gage.

Daily Gage Height, in Feet, of East Branch of Oswegatchie River at Newton Falls

1914	Jan.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.0	0.8	2.4	3.8	1.80	1.80	1.80	2.20	2.00	0.65	2.40
2	2.0	2.2	2.4	4.0	1.80	1.80	0.60	2.40	2.00	1.45	2.40
3	2.0	2.1	2.4	3.5	1.80	1.50	0.10	2.30	2.00	2.00	2.60
4	0.1	2.0	2.4	3.4	1.80	0.80	1.35	2.30	0.65	2.00	3.00
5	2.0	2.0	1.5	3.4	1.80	1.30	1.80	2.30	1.40	2.00	2.70
6	2.0	2.0	2.6	3.4	1.80	2.30	1.80	0.75	2.00	2.00	2.00
7	1.8	2.0	2.6	3.3	0.10	2.00	1.80	1.70	2.00	1.45	2.40
8	1.7	0.1	2.6	3.2	1.80	2.00	1.80	2.30	2.00	0.10	2.40
9	1.9	2.2	2.6	3.2	1.90	2.00	0.60	2.00	2.00	1.60	2.40
10	2.0	2.2	2.4	2.8	2.00	2.00	1.25	2.00	2.00	2.00	2.40
11	0.1	2.2	2.4	3.2	1.80	2.00	1.90	2.00	0.65	2.00	2.40
12	1.9	2.2	0.1	2.8	1.80	1.30	2.00	2.00	1.40	2.00	2.40
13	1.8	2.2	2.5	2.7	1.80	2.00	2.00	0.65	2.00	2.00	0.75
14	......	2.2	2.3	2.6	0.10	2.00	2.00	1.50	2.00	2.00	1.60
15	......	0.8	2.1	2.5	1.80	2.00	2.00	2.00	2.00	0.65	2.20
16	......	2.2	2.0	2.5	1.80	2.00	1.15	2.00	2.00	1.50	2.30
17	......	2.2	2.2	1.4	1.80	2.00	1.90	2.00	2.00	2.10	2.30
18	......	2.1	2.6	2.3	1.80	2.00	2.40	2.00	0.80	2.10	2.30
19	......	2.0	3.3	2.2	1.10	1.15	2.30	2.00	2.20	2.10	2.20
20	......	2.0	4.2	2.2	0.85	1.50	2.10	0.65	2.20	2.20	0.70
21	......	2.0	3.8	2.3	0.10	1.80	2.10	1.40	2.20	2.30	1.60
22	......	0.1	3.8	2.3	0.10	1.80	2.10	2.00	2.30	0.75	2.20
23	......	2.1	4.0	2.3	0.10	1.80	1.20	2.00	2.30	1.50	2.20
24	......	2.0	4.0	0.1	1.35	2.00	1.90	2.00	2.40	2.10	1.60
25	......	2.0	3.9	2.0	1.80	2.00	2.10	2.00	1.15	2.10	0.80
26	......	2.2	4.0	2.0	1.80	0.65	2.00	2.00	2.30	2.10	0.80
27	......	2.2	4.3	1.8	1.80	1.35	2.00	0.65	2.20	2.20	1.00
28	......	2.3	4.2	1.8	0.10	1.80	1.50	1.50	2.00	2.20	1.80
29	......	1.8	4.0	1.8	1.80	1.80	0.45	2.00	2.00	0.70	2.30
30	......	2.7	3.7	1.8	1.80	1.80	0.10	2.00	2.00	1.70	2.30
31	......	2.7	......	0.1	......	1.80	1.45	......	2.00	......	2.10

NOTE.— Discharge relation affected by ice, January 14 to February 28, inclusive. Gage height determined from two observations per day weighted in accordance with time of change of wheels and gates at the mill.

Daily Discharge, in Second-feet, of East Branch of Oswegatchie River at Newton Falls

1914	Jan.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	304	99	402	860	262	262	262	350	304	81	402
2	304	350	402	940	262	262	75	402	304	196	402
3	304	326	402	750	262	205	28	376	304	304	460
4	28	304	402	715	262	99	50	376	81	304	580
5	304	304	205	715	262	171	262	376	188	304	490
6	304	304	460	715	262	376	262	93	304	304	304
7	262	304	460	680	28	304	262	242	304	196	402
8	242	28	460	645	262	304	262	376	304	28	402
9	282	350	460	645	282	304	75	304	304	223	402
10	304	350	402	520	304	304	163	304	304	304	402
11	28	350	402	645	262	304	282	304	81	304	402
12	282	350	28	520	262	171	304	304	188	304	402
13	262	350	430	490	262	304	304	81	304	304	93
14	......	350	376	460	28	304	304	205	304	304	223
15	......	99	326	430	262	304	304	304	304	81	350
16	......	350	304	430	262	304	148	304	304	205	376
17	......	350	350	188	262	304	282	304	304	326	376
18	......	326	460	376	262	304	402	301	99	326	376
19	......	304	680	350	140	148	376	304	350	326	350
20	......	304	1,020	350	106	205	326	84	350	350	87
21	......	304	860	376	28	262	326	188	350	376	223
22	......	28	860	376	28	262	326	304	376	93	350
23	......	326	940	376	28	262	155	304	376	205	350
24	......	304	940	28	50	304	282	304	402	326	223
25	......	304	900	304	262	304	326	304	148	326	99
26	......	350	940	304	262	81	304	304	376	326	99
27	......	350	1,060	262	262	50	304	81	350	350	99
28	......	376	1,020	262	28	262	205	205	304	350	262
29	......	262	940	262	262	262	59	304	304	87	376
30	......	490	820	262	262	262	28	304	304	242	376
31	......	490	......	28	......	262	59	......	304	......	326
Mean	*247	304	590	460	201	252	229	277	287	258	325

* January 1–13, inclusive.

NOTE.— Daily discharge determined from a rating curve that is well defined below 600 second-eet. New rating curve used, beginning January 1, 1914.

Monthly Discharge of East Branch of Oswegatchie River at Newton Falls
[Drainage area, 166 square miles]

1914	Discharge in Second-feet				Run-off	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January 1-13, inclusive	304	28	247	1.49	0.72	A
March	490	28	304	1.83	2.11	A
April	1,060	28	590	3.55	3.96	B
May	940	28	460	2.77	3.19	B
June	304	28	201	1.21	1.35	A
July	376	50	252	1.52	1.75	A
August	402	28	229	1.38	1.59	A
September	402	81	277	1.67	1.86	A
October	402	81	287	1.73	1.99	A
November	376	28	258	1.55	1.73	A
December	580	87	325	1.96	2.26	A

NOTE.— Discharge figures indicate the flow as regulated by Cranberry lake dam and paper mills above the station.

BLACK RIVER DRAINAGE BASIN

BLACK RIVER

DESCRIPTION

Black river rises in the western part of Hamilton county, N. Y., flows southwestward across Herkimer county into Oneida county, turns near Forestport and runs somewhat west of north through Lewis county to eastern Jefferson county and then flows westward to Black River bay, at the eastern extremity of Lake Ontario. Its total drainage area is 1,930 square miles. The upper part of the basin is very rugged and mountainous, contains a large number of lakes and is in a part of the Adirondack forest.

The mean annual precipitation is about 40 inches, ranging from 55 inches in the extreme headwaters to perhaps 30 inches near Lake Ontario. The winters are generally quite severe and the stream flow is affected by ice for periods of several months.

The regimen of the river is controlled by storage on its upper tributaries (including Beaver river at Beaver), a series of reservoirs at the headwaters of Moose river and additional reservoirs at Forestport and on the headwaters of the main river.

Water is diverted from Black river through Forestport feeder to supply the Black River canal at Boonville. A portion of this diverted water flows northward from Boonville and enters Black river again at Lyons Falls; the remainder flows southward through the Black River canal and enters the Erie canal at Rome.

BLACK RIVER NEAR FELTS MILLS

This station was established by Robert E. Horton, August 29, 1902, and is now maintained by this Department. It is located at the dam of the Lefebvre Paper Company, formerly owned by the Black River Traction Company, near the village of Felts Mills. The dam is 9 miles upstream from Watertown and 7 miles upstream from the old Huntingtonville gaging station on this stream. The drainage area is estimated at 1,851 square miles, or 37.5 square miles less than at Huntingtonville. The intervening area is mainly drained by two small streams, Townsend and Rutland Hollow creeks.

During the summer of 1910 the timber dam formerly used at this gaging station was replaced by a masonry dam located a few rods farther downstream. The new dam had a horizontal crest 3.75 feet in width. The downstream face slopes with a batter of about 1 on 1. The main crest, which is 300.45 feet in length, is substantially level. During August, 1914, the main crest was raised with concrete 1.7 feet, giving a horizontal crest 3.5 feet in width.

The gage is attached vertically to a crib at the left-hand side of the stream above the mill. The discharge over the spillways has been calculated by means of the weir formula, using coëfficients derived from experiments of the United States Geological Survey for a dam of similar cross-section.

A wood pulp mill was constructed adjacent to this dam and has been in operation since 1907. The mill contains four 72-inch and one 45-inch Smith-McCormick turbines. A record is kept of the hours run and gate opening of each wheel, as well as of the head under which they operate.

Daily Discharge, in Second-feet, of Black River near Felts Mills

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	1,131	*a*	1,916	18,631	11,629	1,559	2,431	907	4,992	1,357	1,364	3,986
2.....	1,088	*a*	2,141	15,594	11,629	1,391	1,924	589	3,408	1,321	1,357	5,507
3.....	1,013	*a*	1,661	14,346	9,036	1,853	1,924	868	2,487	1,357	1,550	6,432
4.....	788	3,741	1,847	11,398	9,024	1,507	1,405	1,150	2,803	1,057	1,475	6,893
5.....	1,227	3,830	1,722	9,935	8,120	1,575	1,943	1,150	3,079	1,357	1,409	6,585
6.....	955	3,830	1,163	9,621	8,282	1,991	1,485	1,022	1,207	1,475	1,357	4,590
7.....	907	3,267	1,545	7,961	8,120	1,850	2,799	986	725	1,141	1,309	4,659
8.....	981	3,209	2,160	8,120	7,646	2,202	1,306	1,022	2,671	1,357	859	3,427
9.....	1,013	2,876	1,603	9,269	6,923	2,976	1,150	467	2,418	975	1,439	2,930
10.....	955	2,398	1,661	9,621	4,923	2,631	1,061	868	2,107	1,380	1,475	2,930
11.....	1,006	2,072	1,722	10,168	4,852	2,469	1,485	1,107	1,719	680	1,630	2,669
12.....	1,177	1,783	1,661	9,935	4,102	1,991	1,491	1,036	1,957	1,440	1,768	2,376
13.....	907	1,722	1,783	9,801	4,196	1,575	1,306	1,036	1,454	1,380	1,590	1,282
14.....	1,418	2,072	1,758	8,779	5,271	1,492	1,485	1,107	1,480	1,409	1,674	1,919
15.....	1,088	2,077	1,457	8,446	5,418	1,439	1,485	889	1,216	1,334	1,638	1,213
16.....	1,013	2,044	1,655	9,801	5,096	1,263	1,252	557	1,511	1,511	2,208	1,316
17.....	981	1,911	2,146	10,719	3,479	1,263	1,150	868	1,409	1,357	4,405	2,145
18.....	931	2,044	2,876	11,828	3,431	1,289	1,022	868	1,141	989	4,789	2,208
19.....	896	2,044	2,988	13,925	3,028	1,231	1,006	1,033	1,440	1,867	4,279	2,406
20.....	1,131	2,113	2,762	14,786	2,657	1,231	1,150	1,304	922	1,974	3,755	1,454
21.....	1,049	2,182	2,617	21,545	2,476	931	954	872	2,067	2,445	3,322	2,145
22.....	928	2,160	1,996	24,630	2,585	1,231	986	872	1,357	2,589	2,746	2,208
23.....	896	2,653	1,758	19,127	2,585	1,289	1,061	1,222	1,116	2,145	2,589	2,145
24.....	1,013	2,072	2,341	16,179	1,836	1,525	954	1,360	1,321	1,816	2,516	2,145
25.....	859	2,072	2,407	13,695	2,341	1,150	1,104	1,451	1,309	1,365	2,516	1,733
26.....	1,049	1,783	3,267	10,519	2,210	1,150	1,082	1,834	796	1,511	2,669	1,919
27.....	896	1,911	7,802	10,719	2,341	986	1,252	1,541	989	1,309	4,659	1,733
28.....	896	2,072	11,244	10,532	2,341	1,160	1,104	1,543	989	1,309	5,193	1,719
29.....	1,938	......	11,852	10,345	2,146	1,252	1,022	1,705	1,409	1,511	3,943	1,768
30.....	2,240	......	13,482	11,244	1,908	1,684	1,022	3,296	1,311	1,334	3,322	2,029
31.....	2,549	......	16,887	......	1,043	......	868	5,824	......	1,141	......	2,208
Mean...	1,126	2,141	3,674	12,374	4,860	1,571	1,312	1,302	1,760	1,458	2,493	2,861

a No record.

Monthly Discharge of Black River near Felts Mills
[Drainage area, 1,851 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	2,549	788	1,126	0.61	0.70
February	3,830	1,722	2,141	1.16	1.21
March	16,887	1,163	3,674	1.98	2.28
April	24,630	7,961	12,374	6.68	7.45
May	11,629	1,043	4,860	2.63	3.03
June	2,976	931	1,571	0.85	0.95
July	2,799	868	1,312	0.71	0.82
August	5,824	467	1,302	0.70	0.81
September	4,992	725	1,760	0.95	1.06
October	2,589	680	1,458	0.79	0.91
November	5,193	859	2,493	1.35	1.51
December	6,893	1,213	2,861	1.55	1.79
The year	24,630	467	3,069	1.66	22.52

BLACK RIVER NEAR BOONVILLE

Location.—At highway bridge about 2 or 3 miles northeast of Boonville, equal distance by river downstream from Hawkinsville and about 1 mile above the mouth of Sugar river, a small tributary from the left.

Records available.— February 16, 1911, to December 31, 1914.

Drainage area.— 303 square miles. (Measured on U. S. Geological Survey topographic sheets.)

Gage.— Standard chain, fastened to the downstream side of the bridge. A staff gage, graduated from 6 to 13 feet, is fastened to the downstream, righthand abutment and is used for high-water readings.

Control.— Rough and full of boulders; permanent.

Discharge measurements.—At high stages, from a cable about one-half mile above the gage; at low stages, by wading at a section near the cable.

Winter flow.— Discharge relation affected by ice. Flow determined by frequent discharge measurements and climatologic records.

Regulation and diversion.— The State dam at Forestport, about 8 miles upstream, provides a storage reservoir with a capacity of about 2,000,000,000 cubic feet. Water is diverted from this reservoir during the navigation season through the Forestport feeder, flowing west to a basin in Boonville. The Black River canal flows north from this basin, entering the Black river at the foot of Lyon falls. A spillway from the basin overflows into Mill creek, a tributary of Black river. Water flowing through these two channels returns to the river below the gaging station, thus passing around it. The Black River canal also flows south from Boonville, passing out of the Black river drainage and entering the summit level of the Erie canal at Rome. Occasional discharge measurements are made at three points to indicate the distribution of the diverted water. The water entering Boonville through the Forestport feeder is measured at the highway bridge near Sperry Hill, about one mile northeast of Boonville. The water flowing north from the basin through the Black River canal is measured at the highway bridge just below the lock into this canal near the railroad stations. The water flowing south from the basin is measured at a private farm bridge about one mile southeast of Boonville. These measurements are published below.

Accuracy.—A well-defined discharge rating curve has been developed. The records do not give the total discharge of the drainage area.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Black River near Boonville

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Jan. 12[a]	W. S. Easterly	5.00	235
21[b]	W. S. Easterly	4.92	248
22[b]	W. S. Easterly	4.97	240
Feb. 20[c]	C. S. De Golyer	4.92	212
Mar. 25[a]	C. S. De Golyer	4.55	213
June 20[d]	R. S. Barnes	3.55	77
Aug. 31	H. W. Fear	6.11	952
Oct. 22[e]	C. S. De Golyer	3.55	69
Oct. 22[f]	C. S. De Golyer	3.55	71

[a] Backwater from ice. Measurement made by wading 200 feet above gage.
[b] Backwater from ice. Measurement made through ice 200 feet below gage.
[c] Backwater from ice. Measurement made through ice 400 feet above gage.
[d] Measurement made by wading 200 feet above gage.
[e] Measurement made by wading 400 feet above gage.
[f] Measurement made by wading 800 feet above gage.

Current-meter Discharge Measurements of Forestport Feeder at Boonville

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
June 20	R. S. Barnes	1.25	296
July 11	C. S. De Golyer	1.28	240
22	M. J. Maguire	1.00	240
22	M. J. Maguire	1.00	240
Aug. 5	M. J. Maguire	0.99	223
5	M. J. Maguire	1.00	219
19	M. J. Maguire	0.99	228
19	M. J. Maguire	1.01	220
31	Hartwell and Fear	1.19	207
Sept. 14	M. J. Maguire	0.95	220
14	M. J. Maguire	0.95	219
Oct. 23	C. S. De Golyer	0.77	272

Current-meter Discharge Measurements of Black River Canal, Flowing North, at Boonville

DATE		Made by	Gage height	Discharge
1914			*Feet*	*Sec.-ft.*
June	20	R. S. Barnes	4.05	43.6
July	11	C. S. De Golyer	3.72	67.0
	22	M. J. Maguire	1.22	57.0
	23	M. J. Maguire	1.26	58.0
Aug.	5	M. J. Maguire	0.60	45.5
	5	M. J. Maguire	0.72	44.6
	19	M. J. Maguire	3.74	65.0
	19	M. J. Maguire	3.70	65.0
	31	O. W. Hartwell	4.26	47.4
Sept.	14	M. J. Maguire	4.28	46.0
	14	M. J. Maguire	4.38	44.0
Oct.	23	C. S. De Golyer	4.30	32.0

Current-meter Discharge Measurements of Black River Canal, Flowing South, at Boonville

DATE		Made by	Gage height	Discharge
1914			*Feet*	*Sec.-ft.*
June	20	R. S. Barnes	1.15	208
July	11	C. S. De Golyer	1.44	158
	22	M. J. Maguire	1.35	165
	22	M. J. Maguire	1.36	168
Aug.	5	M. J. Maguire	1.53	156
	6	M. J. Maguire	1.53	155
	19	M. J. Maguire	1.19	85
	19	M. J. Maguire	1.14	83
	31	H. W. Fear	1.79	142
Sept.	14	M. J. Maguire	1.39	155
	14	M. J. Maguire	1.40	152
Oct.	23	C. S. De Golyer	*0.91	204

* Water-surface to reference point.

Daily Gage Height, in Feet, of Black River near Boonville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	4.55	5.60	4.75	7.60	7.20	3.60	3.38	3.22	5.80	3.29	3.32	5.35
2.....	4.70	5.80	4.80	7.80	6.40	3.49	3.40	3.18	5.20	3.28	3.41	6.30
3.....	4.90	5.60	4.85	7.60	6.30	3.49	3.60	3.13	4.70	3.15	3.32	6.20
4.....	4.80	5.80	4.80	7.40	6.30	3.45	3.48	3.18	4.60	3.20	3.39	6.30
5.....	4.65	5.70	4.85	7.20	6.60	3.60	3.60	3.08	4.25	3.15	3.50	5.80
6.....	4.60	4.75	4.80	6.60	6.80	3.60	3.60	3.14	3.90	3.12	3.70	5.50
7.....	4.70	4.80	4.80	6.50	6.60	3.80	3.75	3.09	4.10	3.06	3.65	5.20
8.....	4.80	4.60	4.85	6.80	6.70	4.10	3.90	3.12	4.10	3.02	3.70	5.30
9.....	4.70	4.80	4.70	7.50	6.60	4.10	3.65	3.15	3.90	3.12	3.65	5.15
10.....	4.80	5.35	4.80	7.20	6.50	4.00	3.42	3.18	3.95	3.20	3.70	4.90
11.....	4.80	5.25	4.65	6.80	6.60	4.10	3.36	3.41	3.65	3.15	3.60	4.50
12.....	4.90	5.15	4.50	6.80	6.50	4.10	3.55	4.10	3.42	3.18	3.65	4.70
13.....	4.95	5.10	4.65	6.80	6.70	4.00	3.95	3.65	3.32	3.28	3.60	4.80
14.....	4.90	5.20	4.75	6.70	6.90	4.00	4.00	3.22	3.42	3.32	3.70	4.65
15.....	5.50	5.25	4.80	6.80	6.10	3.90	3.80	3.21	3.46	3.28	3.65	4.45
16.....	4.50	5.40	4.65	6.90	6.20	3.80	3.75	3.28	3.34	3.22	3.70	4.70
17.....	4.50	5.20	4.50	7.40	6.30	3.60	3.60	3.21	3.30	3.38	4.00	4.75
18.....	4.60	5.05	4.55	7.60	6.30	3.34	3.60	3.22	3.19	3.60	5.30	4.95
19.....	4.50	5.00	4.65	8.10	5.80	3.28	3.45	3.36	3.28	3.80	5.15	5.00
20.....	4.60	4.80	4.65	9.80	5.50	3.36	3.32	3.55	3.32	3.85	5.00	5.25
21.....	4.80	4.75	4.85	9.20	5.20	3.28	3.35	3.90	3.34	3.80	4.90	5.35
22.....	4.95	4.75	4.95	8.10	4.90	3.32	3.21	4.20	3.22	3.50	4.70	5.30
23.....	4.90	4.70	4.95	7.90	4.90	3.35	3.32	4.40	3.25	3.31	3.60	5.50
24.....	4.85	4.75	5.15	7.70	5.00	3.22	3.35	4.70	3.26	3.32	3.60	5.50
25.....	4.80	4.80	4.60	7.70	4.95	3.28	3.42	4.60	3.32	3.39	5.80	5.60
26.....	4.85	4.60	5.40	7.60	4.95	3.18	3.32	4.50	3.43	3.32	5.60	5.60
27.....	4.95	4.65	7.20	7.70	4.90	3.22	3.28	4.40	3.35	3.34	5.30	......
28.....	4.85	4.80	8.90	7.60	4.80	3.30	3.22	4.40	3.22	3.32	5.20	......
29.....	5.05	......	9.30	7.40	4.60	3.80	3.25	5.00	3.32	3.38	5.30	......
30.....	5.40	......	8.40	7.40	3.85	3.60	3.28	6.30	3.30	3.28	5.25	......
31.....	5.70	......	7.40	......	3.70	......	3.20	6.10	......	3.30	......	......

NOTE.— Discharge relation affected by ice from January 1 to March 27 and December 16 to 1, inclusive.

Daily Discharge, in Second-feet, of Black River at Boonville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	194	630	194	2,380	1,940	84	59	44	795	50	53	558
2.....	227	630	205	2,620	1,210	71	61	40	490	49	62	1,140
3.....	275	558	216	2,380	1,140	71	84	36	305	38	53	1,060
4.....	250	605	216	2,160	1,140	66	70	40	275	42	60	1,140
5.....	216	580	227	1,940	1,370	84	84	33	194	38	72	795
6.....	205	238	216	1,370	1,540	84	84	37	127	36	97	630
7.....	227	250	227	1,290	1,370	111	104	33	164	31	90	490
8.....	250	194	238	1,540	1,460	164	127	36	164	28	97	535
9.....	227	238	205	2,270	1,370	164	90	38	127	36	90	470
10.....	250	390	227	1,940	1,290	145	63	40	136	42	97	370
11.....	......	335	194	1,540	1,370	164	57	62	90	38	84	250
12.....	......	290	164	1,540	1,290	164	78	164	63	40	90	305
13.....	......	275	194	1,540	1,460	145	136	90	53	49	84	335
14.....	......	290	216	1,460	1,640	145	145	44	63	53	97	290
15.....	......	290	238	1,540	990	127	111	43	68	49	90	238
16.....	......	335	205	1,640	1,060	111	104	49	35	44	97	......
17.....	......	275	174	2,160	1,140	84	84	43	51	59	145	......
18.....	......	238	194	2,380	1,140	55	84	44	41	84	535	......
19.....	......	227	216	2,980	795	49	66	57	49	111	470	......
20.....	......	192	216	5,240	630	57	53	78	53	119	410	......
21.....	216	174	275	4,410	490	49	56	127	55	111	370	......
22.....	238	174	305	2,980	370	53	43	184	44	72	305	......
23.....	238	164	305	2,740	370	56	53	227	46	52	84	......
24.....	238	174	390	2,500	410	44	56	305	47	53	795	......
25.....	216	184	227	2,500	390	49	63	275	53	60	795	......
26.....	227	154	490	2,380	390	40	53	250	64	53	680	......
27.....	262	164	1,140	2,500	370	44	49	227	56	55	535	......
28.....	238	194	4,010	2,380	335	51	44	227	44	53	490	......
29.....	305	......	4,540	2,160	275	111	46	410	53	59	535	......
30.....	430	......	3,360	2,160	119	84	49	1,140	51	49	512	......
31.....	580	......	2,160	......	97	......	42	990	......	51	......	......
Mean...	227	302	690	2,290	934	90.9	74.1	175	129	55	242	410

NOTE.— Daily discharge determined from well-defined rating curve. Values given during the frozen period, January 1 to March 27, inclusive, are approximate only.

Monthly Discharge of Black River near Boonville, N. Y.
[Drainage area, 303 square miles]

1914	Discharge in Second-feet			Accuracy
	Maximum	Minimum	Mean	
January	580	....	227.00	C
February	630	154	302.00	B
March	4,540	164	690.00	B
April	5,240	1,290	2,290.00	A
May	1,940	97	934.00	A
June	164	40	90.90	A
July	145	42	74.10	B
August	1,140	33	175.00	A
September	795	41	129.00	B
October	119	28	55.00	B
November	795	53	242.00	B
December	1,140	....	410.00	D
The year	5,240	28	467.00	.....

NOTE.— Mean discharge, January 11 to 20, estimated, 154 second-feet, and December 16 to 31, 257 second-feet. See " Regulation and diversion " in station description.

DEER RIVER, LEWIS COUNTY

DESCRIPTION

Deer river, formed by the junction of several small streams rising at a general elevation of 1,900 feet among swamps in the west central part of Lewis county, flows in a northeasterly direction and joins Black river about twelve miles below Copenhagen.

From the headwaters to the vicinity of New Boston and Bellwood the slope is gradual, becoming quite abrupt from there to about 10 miles above Copenhagen, where the elevation is about 1,200 feet. Below Copenhagen the fall is more rapid, including High falls and Kings falls, until the Black river is reached at about elevation 740. Its principal tributary is Cobb creek, entering from the southeast at a point about 22 miles above Copenhagen. Deer river drains one small body of water, known as Sears pond.

DEER RIVER AT COPENHAGEN

A gaging station was established at High falls dam near Copenhagen by this Department in connection with the Black river survey on January 1, 1912. The gage consists of two 5-foot steel sections, reading from 0 to 10 feet, secured to the left abutment above the dam; the crest of the dam being at elevation 5.00 on the gage.

Readings have been taken twice daily from January 1, 1912, to July 1, 1914, when the station was abandoned.

No discharge computations are available.

Daily Gage Height, in Feet, of Deer River above High Falls Dam, Copenhagen

1912	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	*a*	5.40	5.50	7.00	6.25	6.95	4.25	0.62	2.90	5.78	5.18	5.62
2......	5.30	5.30	5.40	6.90	5.80	6.80	3.25	0.80	4.60	5.85	5.22	7.85
3......	5.30	5.15	5.55	6.70	5.72	6.72	3.70	1.15	4.40	5.70	5.25	8.80
4......	5.25	5.10	5.65	7.00	5.60	6.62	4.50	3.75	4.05	5.70	5.25	6.95
5......	5.25	5.05	5.60	8.50	5.60	6.35	4.40	4.20	3.50	5.60	5.18	6.48
6......	5.15	4.85	5.45	10.00	5.60	5.70	3.05	2.30	3.58	5.45	5.12	7.70
7......	5.25	3.25	5.35	10.75	5.58	5.30	4.25	1.25	2.85	5.32	5.65	6.60
8......	5.28	4.95	5.30	10.00	5.62	5.20	2.25	1.70	3.45	5.28	7.15	6.15
9......	5.25	5.15	5.05	9.00	5.58	5.25	1.10	2.25	4.35	5.12	7.50	5.55
10......	5.22	4.90	4.95	7.50	5.48	5.30	2.00	3.25	3.40	5.00	6.00	5.65
11......	5.28	5.50	3.65	6.75	5.25	5.22	1.80	4.50	2.55	5.05	5.78	6.05
12......	5.45	5.20	1.50	6.40	5.25	5.20	2.25	4.55	1.55	5.25	5.58	6.50
13......	5.60	4.95	0.50	6.20	5.28	5.18	2.90	4.25	2.25	5.28	5.35	5.75
14......	5.30	4.50	1.90	8.15	5.35	5.05	3.55	3.95	0.75	5.18	5.75	5.60
15......	5.30	4.75	4.55	8.45	5.52	......	3.25	3.70	2.75	5.10	6.35	6.05
16......	5.30	5.05	5.50	8.15	5.60	3.50	2.85	3.30	5.45	5.25	6.28	5.85
17......	5.30	4.20	6.25	7.50	5.90	5.20	1.92	2.70	5.10	4.88	5.98	5.55
18......	5.50	3.35	7.15	7.20	6.30	4.50	0.25	4.00	4.50	4.40	5.72	6.05
19......	5.85	4.95	7.40	6.45	6.35	2.25	0.60	4.45	5.45	2.25	5.55	6.70
20......	5.60	5.15	7.60	6.30	6.70	3.75	0.15	4.30	5.25	5.25	5.90	5.85
21......	5.60	5.30	7.25	6.30	7.25	3.40	2.70	4.15	4.80	5.18	6.15	6.00
22......	5.60	5.30	7.00	6.40	7.20	2.55	5.40	3.80	4.70	5.35	5.95	6.00
23......	5.60	5.40	6.10	8.95	6.80	1.50	4.20	3.40	5.20	5.65	5.75	5.88
24......	5.60	5.40	6.10	8.85	6.45	1.50	2.00	1.95	5.22	6.02	5.78	5.80
25......	5.60	5.45	6.75	8.65	6.10	1.80	0.25	2.30	5.05	6.50	5.65	5.72
26......	5.60	5.50	6.60	7.80	5.78	2.95	1.05	4.20	4.92	6.30	5.72	5.60
27......	5.60	5.65	6.60	7.50	5.55	2.00	1.20	4.45	4.68	5.95	5.68	5.60
28......	5.60	5.60	6.60	7.30	5.50	0.35	1.15	4.10	3.42	5.92	5.60	5.45
29......	5.60	5.50	6.85	7.22	5.70	1.55	1.12	4.05	3.55	5.65	5.65	5.40
30......	5.50	......	6.90	7.10	7.50	2.72	0.95	4.02	5.15	5.62	5.60	5.45
31......	5.50	......	7.00	......	7.32	......	0.80	2.40	......	5.45	......	5.75

a No reading.

Daily Gage Height, in Feet, of Deer River above High Falls Dam, Copenhagen

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	5.80	5.90	5.78	7.30	5.45	5.68	1.20	1.80	2.10	4.25	5.90	5.80
2......	5.72	5.85	5.80	6.75	5.40	5.60	1.80	0.20	—0.35	5.10	5.90	5.70
3......	6.10	5.80	5.72	7.25	5.40	5.55	2.30	0.00	—0.80	4.90	5.88	5.60
4......	6.20	5.75	5.70	6.90	5.35	5.40	2.80	0.05	—1.70	3.75	5.80	5.55
5......	6.20	5.70	5.65	6.65	5.30	5.35	4.70	0.00	—2.75	4.15	5.75	6.05
6......	6.75	5.70	5.60	6.45	5.30	5.30	4.90	0.05	—3.60	1.75	5.65	5.90
7......	7.40	5.65	5.60	6.25	5.30	5.55	2.45	0.05	—4.00	1.00	5.60	5.95
8......	7.25	5.60	5.60	6.05	5.30	5.52	1.50	0.12	—4.30	4.20	5.50	5.75
9......	6.90	5.60	5.65	6.00	5.30	5.45	4.00	0.05	—4.90	3.90	5.50	5.80
10......	6.30	5.60	5.85	6.00	5.30	5.40	5.15	0.15	—5.20	3.75	7.25	5.70
11......	6.15	5.60	6.05	6.95	5.25	5.35	5.35	0.15	—5.25	3.10	6.75	5.60
12......	6.00	5.60	6.60	7.20	5.25	5.30	4.95	0.05	—5.15	3.55	7.25	5.50
13......	6.15	5.60	7.65	6.65	5.25	5.25	5.20	—0.45	—5.05	4.35	7.80	5.50
14......	5.95	5.60	9.50	6.10	5.25	5.25	5.25	—0.50	—4.65	3.75	7.40	5.90
15......	5.90	5.60	10.50	6.00	5.25	5.28	4.00	—0.30	—4.75	2.60	6.75	5.65
16......	6.10	5.60	8.30	5.95	5.25	5.40	2.80	—0.40	—4.55	3.40	6.45	5.50
17......	8.40	5.60	7.70	5.90	5.25	5.35	2.00	—0.55	—3.75	4.50	6.25	5.50
18......	8.50	5.60	6.75	5.90	5.25	5.30	1.70	—0.90	—2.75	1.05	5.75	5.50
19......	7.90	5.60	7.75	5.85	5.25	5.35	1.20	—1.65	—1.50	3.25	6.40	5.50
20......	8.85	5.65	7.40	5.80	5.25	5.28	3.55	—2.55	0.10	5.85	9.40	5.40
21......	8.85	6.25	8.55	5.75	5.25	5.20	2.40	—3.25	1.65	8.05	6.95	5.45
22......	8.35	7.10	8.10	5.70	5.45	5.20	0.00	—3.45	5.30	7.25	6.55	5.42
23......	7.90	6.85	7.10	5.70	5.52	3.05	—0.55	—1.55	4.75	6.65	6.40	5.40
24......	7.15	6.40	7.35	5.65	5.50	2.30	1.35	0.15	3.50	6.00	6.30	5.30
25......	7.10	6.00	8.95	5.60	5.50	3.95	2.70	1.20	0.80	6.95	6.20	5.30
26......	6.55	6.00	8.55	5.55	5.45	3.00	1.05	1.55	—0.05	8.05	6.10	5.30
27......	6.15	5.88	9.50	5.55	5.55	3.55	—0.15	2.10	0.45	6.75	6.00	5.30
28......	6.00	5.80	9.30	5.50	6.10	3.20	1.45	3.25	1.70	6.15	5.85	5.35
29......	5.85	......	7.40	5.50	6.40	4.05	2.70	4.50	2.60	6.10	5.65	5.40
30......	5.80	......	6.50	5.45	6.08	3.00	1.25	2.40	3.20	6.00	5.75	5.30
31......	6.00	......	7.95	......	5.85	......	1.20	2.50	......	6.00	......	5.30

Daily Gage Height, in Feet, of Deer River above High Falls Dam, Copenhagen

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	5.20	6.50	2.55	7.75	6.10	4.95	......	......	......	......	......	......
2.....	5.20	6.35	1.75	7.25	5.70	3.75	......	......	......	......	......	......
3.....	5.20	6.05	1.10	6.85	5.65	1.00	......	......	......	......	......	......
4.....	5.20	6.00	1.75	6.55	5.55	4.95	......	......	......	......	......	......
5.....	5.10	5.90	1.50	6.25	5.45	5.10	......	......	......	......	......	......
6.....	5.00	5.80	3.45	6.00	5.90	4.25	......	......	......	......	......	......
7.....	5.10	5.70	2.25	5.90	6.65	4.20	......	......	......	......	......	......
8.....	5.00	5.70	1.55	7.50	6.60	6.50	......	......	......	......	......	......
9.....	4.95	5.60	2.25	7.25	6.10	5.95	......	......	......	......	......	......
10.....	5.20	5.50	4.40	7.00	5.95	5.65	......	......	......	......	......	......
11.....	5.50	5.50	2.00	6.45	5.85	5.30	......	......	......	......	......	......
12.....	5.40	5.40	3.40	6.45	5.40	4.45	......	......	......	......	......	......
13.....	5.20	5.40	2.75	6.85	6.05	3.25	......	......	......	......	......	......
14.....	4.90	5.40	2.75	7.80	5.90	3.65	......	......	......	......	......	......
15.....	4.85	5.50	4.80	8.15	5.60	4.95	......	......	......	......	......	......
16.....	4.65	5.40	5.15	8.50	5.45	4.10	......	......	......	......	......	......
17.....	4.45	5.30	5.50	8.70	5.45	0.75	......	......	......	......	......	......
18.....	4.70	5.20	5.75	9.20	5.35	1.00	......	......	......	......	......	......
19.....	4.25	5.20	5.80	9.10	5.15	4.00	......	......	......	......	......	......
20.....	4.00	5.10	5.55	8.90	5.00	3.25	......	......	......	......	......	......
21.....	3.95	5.05	5.50	8.25	4.85	3.00	......	......	......	......	......	......
22.....	4.95	5.15	5.50	7.25	4.90	4.35	......	......	......	......	......	......
23.....	5.50	5.00	5.50	6.60	5.00	2.25	......	......	......	......	......	......
24.....	5.70	5.00	5.60	6.05	5.25	1.00	......	......	......	......	......	......
25.....	5.40	3.75	5.70	6.00	4.50	1.00	......	......	......	......	......	......
26.....	5.20	2.00	6.65	6.15	3.65	1.75	......	......	......	......	......	......
27.....	3.90	1.80	8.70	6.50	2.75	1.00	......	......	......	......	......	......
28.....	4.50	2.15	9.25	6.10	3.70	4.00	......	......	......	......	......	......
29.....	6.25	......	9.00	6.50	3.30	5.50	......	......	......	......	......	......
30.....	7.00	......	8.45	6.65	3.75	5.60	......	......	......	......	......	......
31.....	6.50	......	7.50	......	3.50	......	......	......	......	......	......	......

BEAVER RIVER

BEAVER RIVER AT STATE DAM

Measurements by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Beaver River at State Dam

Number	Date	Made by	Gate		Lake gage	Discharge
			Number	Opening		
	1912			*Inches*	*Feet*	*Sec.-ft.*
6	Oct. 22[c]	G. H. Canfield	4	12	9.42	o5
7	22[c]	G. H. Canfield	4	24	9.45	128
8	23[c]	G. H. Canfield	1	12	9.92	71
9	23[c]	G. H. Canfield	1	24	9.96	136
10	23[c]	G. H. Canfield	3	24	10.04	128
11	24[c]	G. H. Canfield	3	36	10.28	178
12	24[c]	G. H. Canfield	4	36	10.30	178
13	24[c]	G. H. Canfield	4	48	10.30	204
14	24[c]	G. H. Canfield	1	36	10.30	183
15	25[c]	G. H. Canfield	1	44½	10.51	212

[c] Measurement made from bridge at mouth of tunnel.

MOOSE RIVER

DESCRIPTION

Moose river is tributary to Black river at Lyons Falls, joining Black river just above the head of the fall of about 50 feet. The drainage of Moose river lies chiefly in Hamilton and Herkimer counties and comprises a wild, rugged and little inhabited region, largely forest covered, but containing also large tracts of cut and burned-over lands, and numerous and extensive swamps and lakes. The stream above the gaging station near McKeever comprises three main branches. The south branch is chiefly broad and sluggish. The area tributary to this branch contains extensive swamps and marshes and but few lakes, the most important lakes being the Limekill and Little Moose lakes. The middle branch is substantially a continuous chain of lakes, known as the Fulton Chain, extending from Old Forge a distance of about 15 miles upstream through eight different lakes. The outflow from Fulton Chain is artificially controlled by a State dam at Old Forge. The first to fourth lakes, inclusive, are at elevation 1,706 feet above tide. There is also a dam at the outlet of the sixth lake. Sixth, seventh and eighth lakes are at elevations 1,785 to 1,788 feet above tide. The north branch of the stream is made up of a large number of scattered lakes, the most important one being Big

Moose lake. The lower course of the north branch is sluggish and tortuous. The drainage basin above McKeever is nearly all shown on the Big Moose, Raquette lakes, Old Forge and West Canada lakes quadrangles of the United States Geological Survey topographic maps.

MOOSE RIVER AT MOOSE RIVER

Location.— In the village of Moose River, about 3 miles downstream from McKeever station on the Adirondack division of the New York Central & Hudson River railroad, 5 miles below the mouth of South branch of Moose river, and nearly 20 miles above the junction of Black and Moose rivers at Lyons Falls.

Records available.— June 5, 1900, to December 31, 1914.

Drainage area.— Three hundred and seventy square miles. (Measured on U. S. Geological Survey topographic sheets.)

Gage.— Staff, in two sections, fastened to the left bank a short distance above cable; read twice daily. The gage datum was lowered 0.17 foot on February 28, 1903, and again 5.00 feet on January 1, 1913.

Control.— Composed of cobble and boulders; fairly permanent; current smooth; depth comparatively uniform. Just above the station is a small island on which ice and log jams occasionally form. Velocity from dam at McKeever to the station relatively slow; below the station velocity very high.

Discharge measurements.— Made from a cable a short distance below gage.

Artificial regulation.— A timber dam at McKeever is used for power and for the regulation of flow for log driving. During portions of the year, therefore, two gage readings a day may not give a representative mean. Seasonal distribution of flow affected by operation of State dam at Old Forge.

Winter flow.— Discharge relation affected by ice.

Accuracy.— Discharge rating curve for open channel fairly accurate. Published data for periods of open water considered good.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the State Engineer and Surveyor.

Current-meter Discharge Measurements of Moose River at Moose River

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
June 19 *a*......	R. S. Barnes......................................	5.48	150
Nov. 29 *b*......	R. M. Adams......................................	6.43	407
Nov. 30 *c*......	R. M. Adams......................................	7.06	682
Dec. 16........	C. S. De Golyer and R. M. Adams..................	6.77	361

a Measurement made by wading at regular section.
b Measurement made 200 feet below gage.
c Measurement made from cable 700 feet above gage.

Daily Gage Height, in Feet, of Moose River at Moose River

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	6.60	6.50	6.7	9.5	10.10	6.10	6.80	5.40	7.20	6.10	5.40	7.50
2.....	6.45	7.10	6.8	9.5	9.60	6.10	6.40	5.50	6.25	6.05	6.15	8.30
3.....	6.40	7.10	6.8	9.4	9.60	6.10	7.50	5.55	5.38	6.25	6.40	9.20
4.....	6.15	6.90	6.7	9.2	9.40	6.15	7.00	5.55	7.60	5.39	6.30	8.60
5.....	6.10	6.80	6.8	9.0	9.20	6.90	5.75	5.70	7.20	5.90	6.60	8.20
6.....	5.80	7.00	7.0	8.8	9.30	7.00	5.80	5.85	6.70	6.05	6.35	7.40
7.....	5.85	6.80	7.1	8.5	9.40	6.80	6.20	5.95	6.60	6.05	6.30	7.60
8.....	5.85	6.80	7.0	8.4	9.10	7.00	6.35	6.10	6.60	6.05	5.80	7.20
9.....	5.95	6.70	7.3	9.2	9.00	7.20	6.60	5.75	6.45	6.10	6.05	7.00
10.....	6.10	6.60	7.8	9.3	8.90	7.00	7.30	5.90	6.40	5.80	6.25	7.00
11.....	5.80	6.60	8.0	9.2	8.80	6.30	7.00	5.80	6.20	5.16	6.25	6.80
12.....	6.20	6.60	7.8	9.0	8.40	6.60	7.40	6.00	5.55	5.55	6.10	6.15
13.....	6.35	6.60	7.4	8.7	8.20	6.60	7.10	5.75	5.60	6.60	6.05	5.10
14.....	6.50	6.60	7.2	8.4	8.20	5.75	6.35	5.60	6.10	6.50	5.95	5.50
15.....	6.70	6.60	7.0	8.4	8.10	5.80	6.80	5.70	6.10	6.35	5.90	5.90
16.....	6.80	6.50	6.8	9.2	7.90	5.70	6.35	5.55	6.10	6.40	7.10	6.70
17.....	6.30	6.60	6.6	8.8	7.80	5.65	5.80	5.70	6.05	6.80	8.60	6.60
18.....	5.32	6.60	6.6	9.7	7.50	5.60	5.70	5.55	5.95	5.20	8.50	6.50
19.....	5.50	6.70	6.7	11.2	7.00	5.45	5.30	6.20	6.00	6.45	8.00	6.60
20.....	5.95	6.60	6.6	14.4	6.90	6.00	5.60	6.10	5.60	7.60	7.50	4.95
21.....	6.15	6.45	6.5	13.1	6.80	5.70	5.50	5.95	6.10	6.80	7.10	7.00
22.....	6.45	6.50	6.7	11.8	6.45	5.75	5.40	6.80	6.10	6.35	6.35	6.90
23.....	6.45	6.40	7.0	10.6	6.60	5.55	5.70	6.35	5.90	7.00	6.20	7.00
24.....	6.40	6.45	7.4	10.1	5.65	5.48	6.00	6.70	5.85	6.35	6.25	7.00
25.....	5.70	6.50	7.6	9.8	6.25	5.60	6.35	7.00	6.00	5.55	6.35	5.60
26.....	6.20	6.60	7.8	9.8	6.60	5.50	5.95	6.60	6.35	6.35	6.40	6.80
27.....	6.50	6.70	8.4	9.8	6.60	5.40	5.29	6.15	6.25	6.50	7.00	6.25
28.....	6.45	6.70	9.0	10.3	6.50	5.28	5.41	6.10	6.35	6.25	7.80	7.00
29.....	6.50	......	10.2	10.9	6.60	7.00	5.30	6.50	6.40	6.10	6.60	6.80
30.....	6.40	......	10.1	10.8	6.35	7.20	5.30	8.20	6.20	6.30	7.10	6.60
31.....	6.50	......	9.7	......	5.50	......	5.40	8.00	......	5.90	......	7.30

NOTE.— Discharge relation affected by ice from about January 12 to March 16 and December 9 to 31, inclusive.

Daily Discharge, in Second-feet, of Moose River at Moose River

1914	Jan.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	476	......	2,390	2,960	316	545	126	710	316	126	855
2	426	......	2,390	2,480	316	409	151	362	301	331	1,360
3	409	......	2,300	2,480	316	855	164	121	362	409	2,120
4	331	......	2,120	2,300	331	625	164	910	124	377	1,590
5	316	......	1,940	2,120	585	216	202	710	257	476	1,290
6	229	......	1,760	2,210	625	229	243	510	301	393	805
7	243	......	1,510	2,300	545	346	272	476	301	377	910
8	243	......	1,430	2,030	625	393	316	476	301	229	710
9	271	......	2,120	1,940	710	476	216	426	316	301	......
10	316	......	2,210	1,850	625	755	257	409	229	362	......
11	229	......	2,120	1,760	377	625	229	346	76	362	......
12	......	......	1,940	1,430	476	805	286	164	164	316	......
13	......	......	1,670	1,290	476	665	216	176	476	301	......
14	......	......	1,430	1,290	216	393	176	316	442	272	......
15	......	......	1,430	1,220	229	545	202	316	393	257	......
16	......	......	2,120	1,080	202	393	164	316	409	665	334
17	......	476	1,760	1,020	189	229	202	301	545	1,590	301
18	......	476	2,570	855	176	202	164	272	83	1,510	272
19	......	510	4,230	625	138	103	346	286	426	1,150	316
20	......	476	10,000	585	286	176	316	176	910	855	44
21	......	442	7,260	545	202	151	272	316	545	665	426
22	......	510	5,030	426	216	126	545	316	393	393	393
23	......	625	3,500	476	164	202	393	257	625	346	426
24	......	805	2,960	189	146	286	510	243	393	362	409
25	......	910	2,660	362	176	393	625	286	164	393	50
26	......	1,020	2,660	476	151	272	476	393	393	409	331
27	......	1,430	2,660	476	126	101	331	362	442	625	189
28	......	1,940	3,170	442	99	128	316	393	362	1,020	409
29	......	3,060	3,860	476	625	103	442	409	316	476	346
30	......	2,960	3,740	393	710	103	1,290	346	377	665	286
31	......	2,570	......	151	......	126	1,150	......	257	......	493
Mean	*317	763	2,900	1,230	346	354	347	370	355	534	544

NOTE.— Daily discharge determined from a fairly well-defined rating curve. Daily discharge, December 16 to 31, approximate only.

* January 1–11, inclusive.

Monthly Discharge of Moose River at Moose River

[Drainage area, 370 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January 1–11, inclusive	476	229	317	0.856	0.35	B
March	3,060	....	763	2.06	2.38	C
April	10,000	1,430	2,900	7.84	8.75	B
May	2,960	202	1,230	3.34	3.73	B
June	710	99	346	0.961	1.07	B
July	855	101	354	0.957	1.10	B
August	1,290	126	347	0.938	1.08	B
September	910	121	370	1.00	1.12	B
October	910	76	355	0.959	1.11	B
November	1,590	126	534	1.44	1.61	B
December	2,120	....	544	1.47	1.69	C

NOTE.— Mean discharge, March 1 to 16, estimated by comparison with nearby streams, 340 second-feet, and December 9 to 15, estimated, 315 second-feet. Discharge estimates not corrected for storage at Old Forge dam and McKeever.

MIDDLE BRANCH OF MOOSE RIVER AT OLD FORGE

Location.— About 300 feet below the highway bridge in Old Forge and about 400 feet below the dam.

Records available.— November 9, 1911, to December 31, 1913.

Drainage area.— 51.5 square miles. (Measured on U. S. Geological Survey topographic sheets.)

Gage.— Vertical staff on left bank of stream 300 feet below highway bridge.

Control.— Rock ledge about 200 feet below the gage. Channel fairly straight and uniform from dam to this point.

Discharge measurements.— Made by wading at low and medium stages and from the highway bridge at high stages.

Regulation.— Flow controlled at the dam.

Winter flow.— Ice does not form to an extent sufficient to affect gage heights at this station.

Accuracy.— Discharge rating curve well defined; estimates good.

Coöperation.— Established and maintained by the United State Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Middle Branch of Moose River at Old Forge

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Mar. 24 [a]	C. S. De Golyer	2.75	242
24 [b]	C. S. De Golyer	2.75	238
June 18 [c]	R. S. Barnes	0.55	4.32
18 [d]	R. S. Barnes	2.50	192
18 [d]	R. S. Barnes	1.90	98.8
Nov. 27 [e]	R. M. Adams	0.32	2.0

[a] Measurements made by wading 40 feet above gage.
[b] Measurement made by wading 200 feet above gage.
[c] Measurement made by wading 50 feet below gage.
[d] Measurement made by wading 30 feet above gage.
[e] Measurement made by wading about 60 feet above gage.

Daily Gage Height, in Feet, of Middle Branch of Moose River at Old Forge

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.70	0.75	0.82	3.30	2.25	1.50	1.08	0.86	0.70	2.30	2.35	0.30
2	0.72	0.75	0.85	3.40	2.30	1.50	1.55	1.35	0.60	2.30	2.40	0.31
3	0.72	0.75	0.85	3.40	2.20	0.86	0.99	1.65	0.60	2.30	2.35	0.31
4	0.72	0.75	1.28	3.40	2.15	1.90	0.60	1.65	0.60	2.30	2.30	0.45
5	0.72	0.75	2.35	3.40	2.60	2.55	0.60	1.65	0.60	2.30	2.30	0.49
6	0.72	0.75	2.30	3.30	2.75	2.35	0.60	1.65	0.60	2.30	1.55	0.50
7	0.72	0.75	2.30	3.30	2.25	1.95	1.55	1.65	0.60	2.30	0.65	0.50
8	0.72	0.75	2.30	3.20	2.05	2.10	1.95	1.65	0.60	2.30	0.65	0.50
9	0.72	0.75	2.30	3.20	2.05	1.70	0.99	1.65	0.60	2.60	0.65	0.40
10	0.72	0.75	2.25	3.20	2.05	1.50	0.60	1.65	0.70	2.90	0.65	0.30
11	0.72	0.75	2.25	3.20	2.05	1.60	0.60	1.65	1.00	2.90	0.65	0.30
12	0.72	0.75	2.25	2.85	2.05	2.20	0.60	1.85	1.80	2.80	0.65	0.30
13	0.72	0.75	2.40	2.70	2.50	1.80	0.60	1.95	1.85	2.80	0.65	0.30
14	0.72	0.75	3.00	2.45	2.15	0.86	1.24	1.95	1.85	2.80	0.65	0.32
15	0.72	0.78	3.00	2.35	1.90	0.60	1.50	1.75	1.85	2.80	0.65	0.32
16	0.72	0.78	3.00	2.35	1.90	0.60	0.78	1.65	1.85	2.80	0.65	0.32
17	0.72	0.78	3.00	2.35	1.60	0.60	0.60	1.65	2.00	2.80	0.46	0.32
18	0.72	0.80	2.95	2.55	1.50	0.60	0.60	1.65	2.35	2.80	*a*	0.32
19	0.75	0.80	2.90	2.85	1.50	0.60	0.60	1.65	2.35	2.80	*a*	0.32
20	0.75	0.82	2.85	3.30	1.50	0.60	0.60	1.65	2.40	2.80	*a*	0.32
21	0.75	0.82	2.85	4.30	1.50	0.60	0.60	1.65	2.40	2.80	*a*	0.32
22	0.75	0.82	2.80	4.20	1.50	0.60	1.24	1.65	2.40	2.75	*a*	0.32
23	0.75	0.85	2.80	3.30	1.50	0.60	1.90	1.65	2.40	2.70	*a*	0.32
24	0.75	0.85	2.80	2.50	1.50	0.60	2.10	1.65	2.40	2.70	*a*	0.32
25	0.75	0.85	2.80	2.20	1.50	0.60	1.03	1.65	2.40	2.65	*a*	0.32
26	0.75	0.85	2.80	1.75	1.50	0.60	0.60	1.65	2.40	2.60	*a*	0.32
27	0.75	1.50	2.85	1.70	1.50	0.60	0.60	1.65	2.40	2.60	*a*	0.32
28	0.75	1.10	3.10	1.80	1.50	1.90	0.60	1.65	2.40	2.50	0.30	0.32
29	0.75	......	3.30	1.80	1.50	2.70	1.24	1.65	2.35	2.50	0.30	1.09
30	0.75	......	3.30	2.25	1.50	2.25	1.50	1.65	2.35	2.50	0.30	2.50
31	0.75	......	3.30	......	1.50	......	1.50	1.12	......	2.50	......	2.70

a No record; water below gage.

NOTE.— Discharge relation affected by backwater from McKeever dam, March 28 to May 5, inclusive.

Daily Discharge, in Second-feet, of Middle Branch of Moose River at Old Forge

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.0	11	14	262	76	56.0	26.0	15	9.0	158	173.0	2.0
2	9.8	11	15	262	87	56.0	60.0	44	5.8	158	181.0	2.1
3	9.8	11	15	262	100	15.0	22.0	70	5.8	158	173.0	2.1
4	9.8	11	39	258	100	99.0	5.8	70	5.8	158	165.0	4.1
5	9.8	11	166	256	202	201.0	5.8	70	5.8	158	165.0	4.8
6	9.8	11	158	253	240	166.0	5.8	70	5.8	158	70.0	5.0
7	9.8	11	158	252	150	106.0	60.0	70	5.8	158	10.0	5.0
8	9.8	11	158	249	120	127.0	106.0	70	5.8	158	10.0	5.0
9	9.8	11	158	246	120	75.0	22.0	70	5.8	214	10.0	3.2
10	9.8	11	150	246	120	56.0	5.8	70	9.0	265	10.0	2.0
11	9.8	11	150	246	120	65.0	5.8	70	22.0	260	10.0	2.0
12	9.8	11	150	225	120	142.0	5.8	92	86.0	255	10.0	2.0
13	9.8	11	175	220	192	86.0	5.8	106	92.0	250	10.0	2.0
14	9.8	11	298	175	134	15.0	36.0	106	92.0	250	10.0	2.2
15	9.8	12	298	155	99	5.8	56.0	80	92.0	250	10.0	2.2
16	9.8	12	298	155	99	5.8	12.0	70	92.0	250	10.0	2.2
17	9.8	12	298	160	65	5.8	5.8	70	113.0	250	4.3	2.2
18	9.8	13	286	160	56	5.8	5.8	70	166.0	250	2.0	2.2
19	11.0	13	274	170	56	5.8	5.8	70	166.0	250	2.0	2.2
20	11.0	14	262	......	56	5.8	5.8	70	175.0	250	2.0	2.2
21	11.0	14	262	......	56	5.8	5.8	70	175.0	250	2.0	2.2
22	11.0	14	251	......	56	5.8	36.0	70	175.0	241	2.0	2.2
23	11.0	15	251	......	56	5.8	99.0	70	175.0	232	2.0	2.2
24	11.0	15	251	......	56	5.8	127.0	70	175.0	232	2.0	2.2
25	11.0	15	251	......	56	5.8	24.0	70	175.0	223	2.0	2.2
26	11.0	15	251	......	56	5.8	5.8	70	175.0	214	2.0	2.2
27	11.0	56	262	......	56	5.8	5.8	70	175.0	214	2.0	2.2
28	11.0	27	262	......	56	99.0	5.8	70	175.0	197	2.0	2.2
29	11.0	......	262	......	56	230.0	36.0	70	166.0	197	2.0	32.0
30	11.0	......	262	......	56	150.0	56.0	70	166.0	197	2.0	197.0
31	11.0	......	262	......	56	......	56.0	28	......	197	......	232.0
Mean	10.3	14.3	205	221	94.5	60.6	29.7	69.4	96.4	215	35.2	17.3

NOTE.— Daily discharge determined from a well-defined rating curve. Daily discharge, March 28 to April 19, May 1 to 5 and November 18 to 27, computed from elevations of lake surface and gate openings at Old Forge dam. Discharge rating changing, October 10 to 12, inclusive; daily discharge estimated for these days.

Monthly Discharge of Middle Branch of Moose River at Old Forge
[Drainage area, 51.5 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January	11	9	10.3	0.200	0.23	B
February	56	11	14.3	0.278	0.29	B
March	298	14	205	3.98	4.59	A
April	....	....	221	4.29	4.79	C
May	240	56	94.5	1.83	2.11	B
June	230	5.8	60.6	1.18	1.32	B
July	127	5.8	29.7	0.577	0.67	B
August	106	15	69.4	1.35	1.56	A
September	175	5.8	96.4	1.87	2.09	A
October	265	158	215	4.17	4.81	A
November	181	2	35.2	0.683	0.76	C
December	232	2	17.3	0.336	0.39	C
The year	298	2	90	1.74	23.61	.....

NOTE.— The above figures indicate the flow as regulated at the Old Forge dam. Mean discharge, April 20 to 30, inclusive, estimated, 220 second-feet, from records of lake elevation and gate opening at the dam.

SANDY CREEK DRAINAGE BASIN

SANDY CREEK

DESCRIPTION

Sandy creek rises in Lewis county and flows southwesterly across Jefferson county into Lake Ontario. After uniting with South Sandy creek, it flows but a short distance before entering the lake near the village of Ellisburg, N. Y. The upper portion of the watershed lies in a region of very heavy precipitation and conditions are such that a large percentage takes the form of run-off. About four miles above Adams the North branch enters from the direction of Burrs Mills, while Sandy creek continues through Rodman. Sandy creek has a drainage area of 62 square miles above Rodman and the North branch a drainage area of 38 square miles.

The names of these creeks as here used are as shown in the September, 1909, edition of the Watertown quadrangle of the United States Geological Survey topographical map.

SANDY CREEK AT RODMAN

A gage was established on November 10, 1911, at the mill dam on Sandy creek in Rodman by this Department in connection with the survey for the proposed Black River canal enlargement. Mr. B. F. Wise, the mill owner, has taken readings daily since then until July 1, 1914. The gage was read in the morning before opening the water wheels of the mill. The mill pond was then assumed to be spilling over the crest of the dam an amount equal to the actual discharge of the creek.

Daily Gage Height, in Feet, of Sandy Creek, at Rodman

1911	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	......	......	......	......	......	......	......	2.50
2	......	......	......	......	......	......	......	......	......	......	......	2.40
3	......	......	......	......	......	......	......	......	......	......	......	2.40
4	......	......	......	......	......	......	......	......	......	......	......	2.40
5	......	......	......	......	......	......	......	......	......	......	......	2.40
6	......	......	......	......	......	......	......	......	......	......	......	2.40
7	......	......	......	......	......	......	......	......	......	......	......	2.30
8	......	......	......	......	......	......	......	......	......	......	......	2.30
9	......	......	......	......	......	......	......	......	......	......	......	2.80
10	......	......	......	......	......	......	......	......	......	......	......	2.80
11	......	......	......	......	......	......	......	......	......	......	......	2.80
12	......	......	......	......	......	......	......	......	......	......	2.20	2.80
13	......	......	......	......	......	......	......	......	......	......	2.90	3.00
14	......	......	......	......	......	......	......	......	......	......	2.50	2.80
15	......	......	......	......	......	......	......	......	......	......	2.60	2.60
16	......	......	......	......	......	......	......	......	......	......	2.50	2.50
17	......	......	......	......	......	......	......	......	......	......	2.40	2.80
18	......	......	......	......	......	......	......	......	......	......	3.10	2.50
19	......	......	......	......	......	......	......	......	......	......	2.80	2.50
20	......	......	......	......	......	......	......	......	......	......	2.80	2.40
21	......	......	......	......	......	......	......	......	......	......	2.70	2.40
22	......	......	......	......	......	......	......	......	......	......	2.30	2.30
23	......	......	......	......	......	......	......	......	......	......	2.40	2.90
24	......	......	......	......	......	......	......	......	......	......	2.50	2.40
25	......	......	......	......	......	......	......	......	......	......	2.50	2.20
26	......	......	......	......	......	......	......	......	......	......	2.50	2.20
27	......	......	......	......	......	......	......	......	......	......	2.40	2.40
28	......	......	......	......	......	......	......	......	......	......	2.50	2.20
29	......	......	......	......	......	......	......	......	......	......	3.20	2.20
30	......	......	......	......	......	......	......	......	......	......	2.90	2.30
31	......	......	......	......	......	......	......	......	......	......	......	2.30

Daily Gage Height, in Feet, of Sandy Creek at Rodman

1912	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.20	2.10	2.40	3.30	2.30	4.50	2.40	2.50	2.10	2.40	2.90	2.70
2	2.30	2.10	2.30	3.40	2.20	5.00	2.40	2.40	2.10	2.40	2.80	2.70
3	2.10	2.10	2.30	3.50	2.20	4.80	2.30	2.50	2.10	2.40	2.70	2.80
4	2.20	2.10	2.40	3.20	2.20	4.60	2.30	2.40	2.10	2.30	2.80	2.60
5	2.20	2.20	2.30	3.10	2.40	4.50	2.20	2.60	2.00	2.30	2.60	2.60
6	2.10	2.10	2.20	3.40	2.30	4.10	2.20	2.70	2.00	2.40	2.20	2.70
7	2.20	2.10	2.30	3.60	2.40	4.00	2.20	2.70	2.00	2.50	2.30	2.80
8	2.20	2.10	2.40	4.00	2.30	3.80	2.20	2.60	2.50	2.80	2.40	2.70
9	2.10	2.20	2.20	3.60	2.30	3.60	2.10	2.70	2.60	2.80	2.60	2.60
10	2.10	2.10	2.20	3.40	2.20	3.40	2.30	2.50	2.60	2.70	2.70	2.50
11	2.10	2.10	2.10	3.00	2.20	3.00	2.10	2.60	2.50	2.80	2.70	2.60
12	2.10	2.20	2.20	2.80	2.20	2.60	2.10	2.40	2.50	2.80	2.70	2.70
13	2.10	2.10	2.20	2.70	2.30	2.50	2.20	2.30	2.60	2.90	2.80	2.50
14	2.20	2.10	2.30	3.10	2.40	2.40	2.30	2.30	2.70	2.80	2.70	2.60
15	2.10	2.20	2.30	3.40	2.30	2.20	2.30	2.30	2.70	2.80	2.60	2.70
16	2.10	2.20	2.60	3.40	2.50	2.20	2.50	2.30	2.70	2.70	2.70	2.70
17	2.20	2.10	2.70	3.20	2.50	2.20	2.40	2.40	2.80	2.80	2.80	2.60
18	2.30	2.20	2.70	2.80	2.80	2.30	2.60	2.40	2.80	2.70	2.60	2.70
19	2.20	2.20	3.00	2.50	2.80	2.30	2.40	2.40	2.80	2.80	2.70	2.80
20	2.20	2.30	2.80	2.70	2.70	2.20	2.40	2.40	2.70	2.70	2.80	2.80
21	2.20	2.30	2.80	2.60	2.80	2.20	2.30	2.30	2.70	2.90	2.80	2.70
22	2.20	2.20	2.70	2.60	2.80	2.10	2.40	2.30	2.80	3.00	2.80	2.60
23	2.30	2.20	2.60	2.50	2.70	2.10	2.30	2.20	2.80	2.90	2.70	2.30
24	2.30	2.40	2.50	2.50	2.70	2.10	2.30	2.20	2.60	2.80	2.80	2.10
25	2.30	2.50	2.40	2.40	2.50	2.10	2.30	2.20	2.40	2.50	2.90	2.30
26	2.20	2.40	2.30	2.40	2.50	2.20	2.40	2.20	2.40	2.60	2.80	2.40
27	2.20	2.40	2.40	2.30	2.40	2.10	2.60	2.10	2.40	2.60	2.40	2.50
28	2.20	2.30	2.40	2.40	2.50	2.10	2.50	2.10	2.40	2.80	2.50	2.60
29	2.10	2.40	2.50	2.30	5.15	2.10	2.50	2.10	2.50	2.70	2.50	2.70
30	2.10	......	3.00	2.30	5.00	2.10	2.40	2.00	2.30	2.80	2.60	2.50
31	2.20	......	3.30	......	4.80	......	2.50	2.00	......	2.80	......	2.60

Daily Gage Height, in Feet, of Sandy Creek at Rodman

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	2.60	2.60	......	......	2.20	2.10	......	......	......	......	......
2	......	2.60	2.60	......	......	2.30	2.10	......	......	......	......	......
3	......	2.50	2.70	......	......	2.20	2.00	......	......	......	......	......
4	......	2.50	2.50	......	......	2.20	2.00	......	......	......	......	......
5	......	2.50	2.40	......	......	2.10	2.10	......	......	......	......	......
6	......	2.40	2.30	......	......	2.10	2.00	......	......	......	......	......
7	......	2.30	2.30	......	......	2.10	2.00	......	......	......	......	......
8	......	2.30	2.40	......	......	2.20	2.10	......	......	......	......	......
9	......	2.40	2.20	......	......	2.20	2.00	......	......	......	......	......
10	......	2.30	2.30	......	......	2.20	2.10	......	......	......	......	......
11	......	2.30	2.50	......	......	2.30	2.00	......	......	......	......	......
12	......	2.20	3.10	......	......	2.20	2.10	......	......	......	......	......
13	......	2.30	4.30	......	......	2.10	2.10	......	......	......	......	......
14	......	2.30	4.80	......	......	2.10	2.00	......	......	......	......	......
15	......	2.40	5.10	......	......	2.10	2.10	......	......	......	......	......
16	......	2.40	4.90	......	......	2.10	2.10	......	......	......	......	......
17	......	2.30	4.20	......	......	2.10	2.10	......	......	......	......	......
18	......	2.40	3.10	......	......	2.10	2.00	......	......	......	......	......
19	......	2.50	2.90	......	......	2.10	2.00	......	......	......	......	......
20	......	2.80	3.00	......	......	2.00	2.00	......	......	......	......	......
21	......	2.80	2.80	......	......	2.10	2.10	......	......	......	......	......
22	......	3.20	2.90	......	......	2.00	2.00	......	......	......	......	......
23	......	3.50	2.70	......	......	2.10	2.10	......	......	......	......	......
24	......	3.40	2.60	......	......	2.10	2.00	......	......	......	......	......
25	......	3.20	3.00	......	......	2.00	2.00	......	......	......	......	......
26	......	3.20	3.40	......	......	2.10	2.00	......	......	......	......	......
27	......	3.10	3.50	......	......	2.00	2.00	......	......	......	......	......
28	......	2.80	2.80	......	......	2.10	2.10	......	......	......	......	......
29	......	......	2.90	......	......	2.00	2.00	......	......	......	......	......
30	......	......	3.10	......	......	2.00	2.00	......	......	......	......	......
31	......	......	3.00	......	......	......	2.00	......	......	......	......	......

NOTE.— Elevations lacking above and those for first half of 1914 not now available for publication.

Daily Discharge, in Second-feet, of Sandy Creek at Rodman

1911	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	......	......	......	......	......	......	......	......	......	......	......	131
2.....	......	......	......	......	......	......	......	......	......	......	......	94
3.....	......	......	......	......	......	......	......	......	......	......	......	94
4.....	......	......	......	......	......	......	......	......	......	......	......	94
5.....	......	......	......	......	......	......	......	......	......	......	......	94
6.....	......	......	......	......	......	......	......	......	......	......	......	94
7.....	......	......	......	......	......	......	......	......	......	......	......	61
8.....	......	......	......	......	......	......	......	......	......	......	......	61
9.....	......	......	......	......	......	......	......	......	......	......	......	265
10.....	......	......	......	......	......	......	......	......	......	......	......	265
11.....	......	......	......	......	......	......	......	......	......	......	......	265
12.....	......	......	......	......	......	......	......	......	......	......	33	265
13.....	......	......	......	......	......	......	......	......	......	......	316	365
14.....	......	......	......	......	......	......	......	......	......	......	131	265
15.....	......	......	......	......	......	......	......	......	......	......	174	174
16.....	......	......	......	......	......	......	......	......	......	......	131	131
17.....	......	......	......	......	......	......	......	......	......	......	94	265
18.....	......	......	......	......	......	......	......	......	......	......	433	131
19.....	......	......	......	......	......	......	......	......	......	......	265	131
20.....	......	......	......	......	......	......	......	......	......	......	265	94
21.....	......	......	......	......	......	......	......	......	......	......	216	94
22.....	......	......	......	......	......	......	......	......	......	......	61	61
23.....	......	......	......	......	......	......	......	......	......	......	94	316
24.....	......	......	......	......	......	......	......	......	......	......	131	94
25.....	......	......	......	......	......	......	......	......	......	......	131	33
26.....	......	......	......	......	......	......	......	......	......	......	131	33
27.....	......	......	......	......	......	......	......	......	......	......	94	94
28.....	......	......	......	......	......	......	......	......	......	......	131	33
29.....	......	......	......	......	......	......	......	......	......	......	486	33
30.....	......	......	......	......	......	......	......	......	......	......	316	61
31.....	......	......	......	......	......	......	......	......	......	......	......	61
Mean...	......	......	......	......	......	......	......	......	......	......	191	137

Daily Discharge, in Second-feet, of Sandy Creek at Rodman

1912	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	33	12	94	550	61	1,462	94	131	12	94	316	216
2.....	61	12	61	622	33	1,922	94	94	12	94	265	216
3.....	12	12	61	680	33	1,733	61	131	12	94	216	265
4.....	33	12	94	486	33	1,691	61	94	12	61	265	174
5.....	33	33	61	433	94	1,462	33	174	*a*	61	174	174
6.....	12	12	33	622	61	1,126	33	216	*a*	94	33	216
7.....	33	12	61	749	94	1,045	33	216	*a*	131	61	265
8.....	33	12	94	1,045	61	893	33	174	131	265	94	216
9.....	12	33	33	749	61	749	12	216	174	265	174	174
10.....	12	12	33	622	33	622	61	131	174	216	216	131
11.....	12	12	12	370	33	370	12	174	131	265	216	174
12.....	12	33	33	265	33	174	12	94	131	265	216	216
13.....	12	12	33	216	61	131	33	61	174	316	265	131
14.....	33	12	61	433	94	94	61	61	216	265	216	174
15.....	12	33	61	622	61	33	61	61	216	265	174	216
16.....	12	33	174	622	131	33	131	61	265	216	216	216
17.....	33	12	216	486	131	33	94	94	265	265	265	174
18.....	61	33	216	265	265	61	174	94	265	216	174	216
19.....	33	33	370	131	265	61	94	94	216	265	216	265
20.....	33	61	265	216	216	33	94	94	216	216	265	265
21.....	33	61	265	174	265	33	61	61	265	316	265	216
22.....	33	33	216	174	265	12	94	61	265	370	265	174
23.....	61	33	174	131	216	12	61	33	174	316	216	61
24.....	61	94	131	131	216	12	61	33	94	265	265	12
25.....	61	131	94	94	131	12	61	33	94	131	316	61
26.....	33	94	61	94	131	33	94	33	94	174	265	94
27.....	33	94	94	61	94	12	174	12	94	174	94	131
28.....	33	61	94	94	131	12	131	12	131	216	131	174
29.....	12	94	131	61	2,070	12	131	12	61	265	131	216
30.....	12	......	370	61	1,922	12	94	*a*	61	216	174	131
31.....	33	......	550	......	1,733	......	131	*a*	......	265	......	174
Mean...	30	39	137	375	291	463	76	89	132	214	205	178

a Flow too small for measurement.

Daily Discharge, in Second-feet, of Sandy Creek at Rodman

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	174	174	174	433	33	33	12	*a*	*a*	94	131	216
2.....	94	174	174	316	33	61	12	*a*	*a*	94	94	265
3.....	131	131	216	265	12	33	*a*	*a*	*a*	131	131	316
4.....	370	131	131	370	12	33	*a*	*a*	12	131	94	265
5.....	433	131	94	316	33	12	12	*a*	33	94	174	216
6.....	550	94	61	265	33	12	*a*	*a*	33	61	33	265
7.....	486	61	61	265	12	12	*a*	*a*	61	94	33	265
8.....	370	61	94	216	33	33	12	*a*	33	61	61	316
9.....	316	94	33	174	12	33	*a*	*a*	33	131	174	265
10.....	316	61	94	216	12	33	12	*a*	12	94	216	216
11.....	265	61	131	216	12	61	*a*	*a*	33	94	265	131
12.....	265	33	433	174	12	33	12	*a*	33	131	316	174
13.....	216	33	1,290	265	33	12	12	*a*	33	174	265	265
14.....	216	61	1,733	219	12	12	*a*	*a*	61	216	433	216
15.....	316	61	2,019	174	33	12	12	*a*	94	216	316	265
16.....	749	94	1,827	131	33	12	12	*a*	33	216	265	265
17.....	819	94	1,176	94	12	12	12	*a*	61	265	316	265
18.....	749	61	433	94	12	12	*a*	*a*	33	265	265	216
19.....	622	94	316	94	12	12	*a*	*a*	33	174	216	265
20.....	486	131	370	94	33	*a*	*a*	*a*	61	216	265	316
21.....	370	265	265	61	61	12	12	*a*	94	216	174	370
22.....	433	486	316	94	33	*a*	*a*	*a*	94	174	94	370
23.....	216	680	216	61	33	12	12	*a*	131	216	131	316
24.....	316	622	174	61	61	12	*a*	*a*	131	216	174	216
25.....	265	486	370	94	12	*a*	*a*	*a*	94	174	216	174
26.....	174	486	622	61	94	12	*a*	*a*	94	131	131	216
27.....	216	433	131	94	131	*a*	*a*	*a*	94	94	94	265
28.....	131	265	265	61	94	12	12	*a*	94	94	131	316
29.....	131	......	316	61	61	*a*	*a*	*a*	131	131	174	216
30.....	94	......	433	33	61	*a*	*a*	*a*	94	174	216	174
31.....	174	......	370	......	61	......	*a*	*a*	......	174	......	131
Mean...	337	198	462	169	36	19*	8*	......	58	153	186	250

a Flow too small for measurement. * Estimated.

Daily Discharge, in Second-feet, of Sandy Creek at Rodman

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	131	370	33	1,290	61	12	......	......	......	......	......	......
2.....	174	316	12	968	61	12	......	......	......	......	......	......
3.....	94	316	12	819	33	33	......	......	......	......	......	......
4.....	131	265	12	749	33	33	......	......	......	......	......	......
5.....	94	265	12	749	61	12	......	......	......	......	......	......
6.....	61	174	12	680	94	12	......	......	......	......	......	......
7.....	61	174	33	749	94	893	......	......	......	......	......	......
8.....	61	131	12	550	61	819	......	......	......	......	......	......
9.....	61	131	12	433	94	433	......	......	......	......	......	......
10.....	94	131	12	316	61	271	......	......	......	......	......	......
11.....	94	94	33	265	61	131	......	......	......	......	......	......
12.....	61	131	12	174	131	61	......	......	......	......	......	......
13.....	33	131	33	174	174	33	......	......	......	......	......	......
14.....	61	174	33	216	174	12	......	......	......	......	......	......
15.....	33	131	61	265	131	12	......	......	......	......	......	......
16.....	33	131	94	265	94	33	......	......	......	......	......	......
17.....	33	94	174	316	61	33	......	......	......	......	......	......
18.....	33	61	316	265	61	33	......	......	......	......	......	......
19.....	12	61	216	265	61	33	......	......	......	......	......	......
20.....	33	33	174	216	33	12	......	......	......	......	......	......
21.....	33	33	216	265	33	33	......	......	......	......	......	......
22.....	94	33	216	316	12	12	......	......	......	......	......	......
23.....	131	12	131	370	33	12	......	......	......	......	......	......
24.....	131	12	131	265	33	*a*	......	......	......	......	......	......
25.....	131	12	893	216	12	12	......	......	......	......	......	......
26.....	174	12	1,045	216	12	33	......	......	......	......	......	......
27.....	131	12	968	131	33	33	......	......	......	......	......	......
28.....	216	12	893	265	12	94	......	......	......	......	......	......
29.....	433	......	1,733	94	12	265	......	......	......	......	......	......
30.....	370	......	1,462	61	12	216	......	......	......	......	......	......
31.....	316	......	1,733	......	12	......	......	......	......	......	......	......
Mean...	114	123	346	397	60	121	......	......	......	......	......	......

Monthly Discharge of Sandy Creek at Rodman
[Drainage area, 62 square miles]

DATE	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
1911					
November	486	33	191	3.080	3.44
December	365	33	137	2.209	2.55
1912					
January	61	12	30	0.484	0.56
February	131	12	39	0.629	0.66
March	550	12	137	2.21	2.55
April	1,045	61	375	6.042	6.74
May	2,070	33	291	4.693	5.41
June	1,922	12	463	7.467	8.33
July	174	12	76	1.226	1.41
August	216	12	89	1.435	1.65
September	265	....	132	2.129	2.38
October	370	61	214	3.451	3.98
November	316	33	205	3.306	3.69
December	265	12	178	2.871	3.31
1913					
January	819	94	337	5.435	6.27
February	680	33	198	3.193	3.32
March	2,019	33	462	7.451	8.59
April	433	33	169	2.726	3.04
May	131	12	36	0.58	0.67
June	61	....	*19	0.306	0.84
July	12	....	*8	0.129	0.15
August	....	....	....	....	....
September	131	....	58	0.935	1.04
October	265	61	153	2.466	2.84
November	433	33	186	3.00	3.35
December	370	131	250	4.032	4.65
1914					
January	433	12	114	1.839	2.12
February	370	12	123	1.984	2.07
March	1,733	12	346	5.580	6.43
April	1,290	61	397	6.403	7.14
May	174	12	60	0.968	1.12
June	893	....	121	1.952	2.18

* Estimated.

NORTH BRANCH, SANDY CREEK

NORTH BRANCH, SANDY CREEK, AT WEST RODMAN

A short distance above its junction with Sandy creek there is a storage reservoir site on the North Branch. Immediately below this site a weir was built and a gage established near the hamlet known as West Rodman, by this Department in connection with the survey for the Black River canal project. This gage was read by Mr. Newell Heath from November 10, 1911, to July 1, 1914. The weir was damaged by flood on April 5. 1912, and its use abandoned, discharge being obtained from a rating curve established by current-meter measurements. This gage was carried away by ice, January 30, 1914, and from February 5, 1914, measurements were taken from the top of the bridge abutment, which is 8 feet above the zero of the gage.

Daily Gage Height, in Feet, of North Branch, Sandy Creek, at West Rodman

1911	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	......	......	......	......	......	......	......	2.25
2	......	......	......	......	......	......	......	......	......	......	......	2.05
3	......	......	......	......	......	......	......	......	......	......	......	1.90
4	......	......	......	......	......	......	......	......	......	......	......	2.20
5	......	......	......	......	......	......	......	......	......	......	......	1.60
6	......	......	......	......	......	......	......	......	......	......	......	1.60
7	......	......	......	......	......	......	......	......	......	......	......	1.60
8	......	......	......	......	......	......	......	......	......	......	......	1.65
9	......	......	......	......	......	......	......	......	......	......	......	1.85
10	......	......	......	......	......	......	......	......	......	......	......	2.00
11	......	......	......	......	......	......	......	......	......	......	......	1.90
12	......	......	......	......	......	......	......	......	......	......	1.45	1.95
13	......	......	......	......	......	......	......	......	......	......	1.80	2.55
14	......	......	......	......	......	......	......	......	......	......	1.70	2.50
15	......	......	......	......	......	......	......	......	......	......	1.70	2.30
16	......	......	......	......	......	......	......	......	......	......	1.60	2.40
17	......	......	......	......	......	......	......	......	......	......	1.55	2.40
18	......	......	......	......	......	......	......	......	......	......	1.95	2.30
19	......	......	......	......	......	......	......	......	......	......	2.40	2.00
20	......	......	......	......	......	......	......	......	......	......	2.20	1.85
21	......	......	......	......	......	......	......	......	......	......	2.20	1.80
22	......	......	......	......	......	......	......	......	......	......	2.00	1.70
23	......	......	......	......	......	......	......	......	......	......	1.95	2.00
24	......	......	......	......	......	......	......	......	......	......	1.95	2.05
25	......	......	......	......	......	......	......	......	......	......	1.90	1.85
26	......	......	......	......	......	......	......	......	......	......	1.80	1.80
27	......	......	......	......	......	......	......	......	......	......	1.80	1.80
28	......	......	......	......	......	......	......	......	......	......	1.90	1.65
29	......	......	......	......	......	......	......	......	......	......	2.95	1.60
30	......	......	......	......	......	......	......	......	......	......	2.55	1.60
31	......	......	......	......	......	......	......	......	......	......	......	1.50

Daily Gage Height, in Feet, of North Branch, Sandy Creek, at West Rodman

1912	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.60	1.20	1.60	2.80	0.50	1.55	—0.21	......	*a*	0.40	0.25	0.25
2	1.50	1.20	1.60	2.70	0.50	1.25	—0.27	......	0.05	0.45	0.30	0.45
3	1.50	1.20	1.40	2.15	0.45	1.10	—0.33	......	0.15	0.30	0.25	2.05
4	1.50	1.15	1.30	1.90	0.40	0.95	*a*	......	0.00	0.20	0.20	1.60
5	1.60	1.10	1.30	2.75	0.30	0.80	*a*	......	—0.29	0.20	0.20	1.15
6	1.45	1.10	1.30	2.60	0.45	0.75	*a*	......	—0.12	0.15	0.20	1.05
7	1.40	1.10	1.30	2.75	0.45	0.70	*a*	......	—0.21	0.10	0.35	1.00
8	1.50	1.10	1.30	1.95	0.40	0.60	*a*	......	—0.25	0.10	0.85	0.80
9	1.40	1.10	1.20	1.35	0.40	0.50	*a*	......	—0.33	0.10	0.85	0.80
10	1.50	1.10	1.20	1.30	0.40	0.40	*a*	......	*a*	0.10	0.55	0.65
11	1.70	1.10	1.20	1.30	0.35	0.30	*a*	......	*a*	0.10	0.35	0.40
12	1.95	1.10	1.20	1.15	0.20	0.30	*a*	......	*a*	0.10	0.25	0.65
13	2.30	1.10	1.15	1.10	0.40	0.30	*a*	......	*a*	0.10	0.25	0.80
14	2.55	1.10	1.10	1.10	0.65	0.25	*a*	......	*a*	0.10	0.50	1.00
15	2.20	1.10	1.30	1.15	0.45	0.20	*a*	......	*a*	0.10	0.60	1.25
16	1.65	1.10	2.05	1.15	0.50	0.20	*a*	......	0.05	0.10	0.45	0.70
17	1.35	1.10	2.10	1.00	0.85	0.20	*a*	......	—0.17	0.10	0.30	0.40
18	1.45	1.10	2.55	0.90	0.85	0.15	*a*	......	—0.12	0.00	0.30	0.20
19	2.00	1.15	3.30	1.00	0.65	0.10	*a*	......	0.25	0.10	0.20	0.55
20	1.95	1.30	3.55	1.00	0.75	0.10	*a*	......	0.15	0.10	0.20	0.60
21	1.80	1.55	2.85	0.90	1.45	0.00	0.30	......	0.05	0.10	0.10	0.85
22	1.65	1.40	2.90	0.85	1.50	0.00	0.00	......	—0.17	0.05	0.10	1.05
23	1.60	1.10	2.70	1.30	1.20	0.00	—0.17	......	—0.16	0.05	0.10	1.30
24	1.55	1.40	2.25	1.30	1.00	0.00	*a*	......	0.00	0.20	0.10	1.00
25	1.50	1.50	2.20	1.15	1.00	0.00	*a*	......	0.10	0.40	0.10	0.30
26	1.40	1.50	2.10	0.95	0.85	0.00	*a*	......	0.10	0.40	0.20	0.15
27	1.35	1.70	1.60	0.85	0.65	—0.08	*a*	......	0.05	0.45	0.20	0.15
28	1.30	1.70	1.60	0.70	0.80	—0.12	*a*	......	0.00	0.40	0.30	0.45
29	1.25	1.65	2.55	0.70	1.85	—0.17	*a*	......	0.05	0.30	0.60	0.45
30	1.20	......	3.20	0.60	2.10	—0.21	*a*	......	0.15	0.30	0.25	0.20
31	1.20	......	3.10	......	1.50	......	*a*	......	......	0.20	......	0.60

a No reading; gage location dry.

Daily Gage Height, in Feet, of North Branch, Sandy Creek, at West Rodman

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	0.60	0.75	0.65	0.45	*a*	*a*	*a*	*a*	*a*	*a*	*a*	—0.33
2.....	0.40	1.30	0.60	0.25	*a*	*a*	*a*	*a*	*a*	*a*	*a*	—0.33
3.....	1.05	1.20	0.60	0.50	*a*	*a*	*a*	*a*	*a*	*a*	*a*	—0.33
4.....	0.90	1.60	0.50	1.10	*a*	*a*	*a*	*a*	*a*	*a*	*a*	—0.29
5.....	0.90	1.80	0.65	1.20	*a*	*a*	*a*	*a*	*a*	*a*	*a*	—0.21
6.....	0.95	1.50	0.40	0.80	*a*	*a*	*a*	*a*	*a*	*a*	*a*	—0.29
7.....	1.50	1.35	0.30	0.65	*a*	*a*	*a*	*a*	*a*	*a*	*a*	—0.33
8.....	1.25	1.30	0.30	0.35	*a*	*a*	*a*	*a*	*a*	*a*	*a*	—0.29
9.....	1.60	1.30	0.55	0.25	*a*	*a*	*a*	*a*	*a*	*a*	*a*	—0.17
10.....	1.90	1.20	1.10	0.10	*a*	*a*	*a*	*a*	*a*	*a*	*a*	—0.25
11.....	1.45	1.10	1.45	0.40	*a*	*a*	*a*	*a*	*a*	*a*	*a*	—0.25
12.....	1.60	1.10	1.80	0.35	*a*	*a*	*a*	*a*	*a*	*a*	—0.04	—0.33
13.....	1.50	1.00	1.80	0.20	*a*	*a*	*a*	*a*	*a*	*a*	—0.04	—0.33
14.....	1.50	0.85	2.45	0.15	*a*	*a*	*a*	*a*	*a*	*a*	0.05	—0.04
15.....	1.15	0.70	1.65	0.10	*a*	*a*	*a*	*a*	*a*	*a*	0.00	0.10
16.....	1.50	0.50	1.25	0.00	*a*	*a*	*a*	*a*	*a*	*a*	—0.08	0.00
17.....	1.60	0.40	0.70	—0.12	*a*	*a*	*a*	*a*	*a*	*a*	—0.17	0.00
18.....	1.35	0.30	0.55	—0.21	*a*	*a*	*a*	*a*	*a*	*a*	—0.21	0.00
19.....	1.90	0.25	0.55	—0.25	*a*	*a*	*a*	*a*	*a*	*a*	0.12	—0.08
20.....	1.65	0.20	0.50	—0.25	*a*	*a*	*a*	*a*	*a*	*a*	0.55	—0.17
21.....	1.40	1.10	0.40	—0.33	*a*	*a*	*a*	*a*	*a*	0.10	0.50	—0.17
22.....	1.00	1.35	0.30	—0.33	*a*	*a*	*a*	*a*	*a*	0.20	0.25	—0.25
23.....	1.05	2.05	0.30	—0.33	*a*	*a*	*a*	*a*	*a*	—0.08	0.20	—0.33
24.....	1.05	1.80	0.25	*a*	*a*	*a*	*a*	*a*	*a*	—0.21	0.10	—0.08
25.....	0.60	1.70	0.95	*a*	*a*	*a*	*a*	*a*	*a*	—0.17	0.00	—0.17
26.....	0.60	1.10	1.15	*a*	*a*	*a*	*a*	*a*	*a*	—0.12	—0.04	—0.17
27.....	0.60	0.90	1.45	*a*	*a*	*a*	*a*	*a*	*a*	—0.25	—0.08	—0.08
28.....	0.60	0.75	0.90	*a*	*a*	*a*	*a*	*a*	*a*	—0.29	—0.17	0.00
29.....	0.60	......	0.65	*a*	*a*	*a*	*a*	*a*	*a*	—0.29	—0.25	—0.21
30.....	0.60	......	0.50	*a*	*a*	*a*	*a*	*a*	*a*	—0.17	—0.33	—0.33
31.....	0.40	......	0.45	......	*a*	......	*a*	*a*	......	*a*	......	—0.33

a No record; gage location dry.

Daily Gage Height, in Feet, of North Branch, Sandy Creek, at West Rodman

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	*a*	1.08	*a*	0.25	—0.17	*a*	......	......	......	......	......	......
2.....	*a*	1.17	*a*	0.33	—0.25	*a*	......	......	......	......	......	......
3.....	*a*	1.04	*a*	0.25	—0.33	*a*	......	......	......	......	......	......
4.....	*a*	0.83	*a*	0.12	......	*a*	......	......	......	......	......	......
5.....	*a*	0.50	*a*	0.00	—0.29	*a*	......	......	......	......	......	......
6.....	*a*	0.29	*a*	0.00	—0.21	*a*	......	......	......	......	......	......
7.....	*a*	0.00	*a*	0.00	—0.33	*a*	......	......	......	......	......	......
8.....	*a*	—0.17	*a*	0.12	—0.42	0.12	......	......	......	......	......	......
9.....	*a*	—0.17	*a*	0.17	*a*	—0.21	......	......	......	......	......	......
10.....	*a*	0.12	*a*	0.08	*a*	*a*	......	......	......	......	......	......
11.....	*a*	0.21	*a*	0.21	*a*	*a*	......	......	......	......	......	......
12.....	—0.17	0.42	*a*	0.29	*a*	*a*	......	......	......	......	......	......
13.....	—0.08	0.58	*a*	0.00	—0.42	*a*	......	......	......	......	......	......
14.....	—0.12	0.88	*a*	—0.08	—0.42	*a*	......	......	......	......	......	......
15.....	—0.33	1.00	*a*	—0.08	—0.42	*a*	......	......	......	......	......	......
16.....	*a*	0.54	0.71	0.00	*a*	*a*	......	......	......	......	......	......
17.....	*a*	—0.17	1.21	0.04	*a*	*a*	......	......	......	......	......	......
18.....	*a*	—0.21	1.33	0.00	*a*	*a*	......	......	......	......	......	......
19.....	*a*	—0.33	1.46	—0.08	*a*	*a*	......	......	......	......	......	......
20.....	*a*	—0.42	1.58	0.00	*a*	*a*	......	......	......	......	......	......
21.....	*a*	*a*	1.38	—0.08	*a*	*a*	......	......	......	......	......	......
22.....	*a*	*a*	0.62	—0.17	*a*	*a*	......	......	......	......	......	......
23.....	*a*	*a*	0.25	—0.25	*a*	*a*	......	......	......	......	......	......
24.....	—0.17	*a*	0.17	—0.29	*a*	*a*	......	......	......	......	......	......
25.....	—0.33	*a*	0.58	—0.29	*a*	*a*	......	......	......	......	......	......
26.....	—0.33	*a*	1.46	—0.17	*a*	*a*	......	......	......	......	......	......
27.....	—0.12	*a*	1.67	—0.17	*a*	*a*	......	......	......	......	......	......
28.....	0.50	*a*	1.33	—0.25	*a*	*a*	......	......	......	......	......	......
29.....	0.90	......	0.67	0.00	*a*	*a*	......	......	......	......	......	......
30.....	1.54	......	0.25	—0.08	*a*	*a*	......	......	......	......	......	......
31.....	1.21	......	0.17	......	*a*	......	......	......	......	......	......	......

a No reading; gage location dry, gage discontinued July 1.

Daily Discharge, in Second-Feet, of North Branch, Sandy Creek, at West Rodman

1911	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	......	......	......	......	......	......	......	140
2	......	......	......	......	......	......	......	......	......	......	......	107
3	......	......	......	......	......	......	......	......	......	......	......	85
4	......	......	......	......	......	......	......	......	......	......	......	131
5	......	......	......	......	......	......	......	......	......	......	......	46
6	......	......	......	......	......	......	......	......	......	......	......	46
7	......	......	......	......	......	......	......	......	......	......	......	46
8	......	......	......	......	......	......	......	......	......	......	......	52
9	......	......	......	......	......	......	......	......	......	......	......	78
10	......	......	......	......	......	......	......	......	......	......	35	100
11	......	......	......	......	......	......	......	......	......	......	35	85
12	......	......	......	......	......	......	......	......	......	......	30	92
13	......	......	......	......	......	......	......	......	......	......	71	193
14	......	......	......	......	......	......	......	......	......	......	58	183
15	......	......	......	......	......	......	......	......	......	......	58	148
16	......	......	......	......	......	......	......	......	......	......	46	165
17	......	......	......	......	......	......	......	......	......	......	41	165
18	......	......	......	......	......	......	......	......	......	......	92	148
19	......	......	......	......	......	......	......	......	......	......	165	100
20	......	......	......	......	......	......	......	......	......	......	131	78
21	......	......	......	......	......	......	......	......	......	......	131	71
22	......	......	......	......	......	......	......	......	......	......	100	59
23	......	......	......	......	......	......	......	......	......	......	92	100
24	......	......	......	......	......	......	......	......	......	......	92	107
25	......	......	......	......	......	......	......	......	......	......	85	78
26	......	......	......	......	......	......	......	......	......	......	71	71
27	......	......	......	......	......	......	......	......	......	......	71	71
28	......	......	......	......	......	......	......	......	......	......	85	52
29	......	......	......	......	......	......	......	......	......	......	272	46
30	......	......	......	......	......	......	......	......	......	......	193	46
31	......	......	......	......	......	......	......	......	......	......	......	35
Mean	......	......	......	......	......	......	......	......	......	......	65	94

Gage established, November 10, 1911.

Daily Discharge, in Second-feet, of North Branch, Sandy Creek, at West Rodman

1912	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	46	*a*	46	241	80	435	10	*a*	*a*	62	37	80
2	35	9	46	221	80	285	9	*a*	5	71	45	62
3	35	9	25	123	71	222	8	*a*	15	45	37	220
4	35	6	16	85	62	177	*a*	*a*	5	28	28	165
5	46	3	16	231	45	140	*a*	*a*	3	28	28	220
6	30	3	16	690	71	128	*a*	*a*	4	20	28	190
7	25	3	16	715	71	117	*a*	*a*	3	11	52	190
8	35	3	16	580	62	97	*a*	*a*	3	11	150	165
9	25	3	10	335	62	80	*a*	*a*	2	11	150	140
10	35	3	10	310	62	62	*a*	*a*	*a*	11	90	115
11	58	3	10	310	54	45	*a*	*a*	*a*	11	52	62
12	92	3	10	240	28	45	*a*	*a*	*a*	11	37	97
13	148	3	6	220	62	45	*a*	*a*	*a*	11	87	140
14	192	3	3	220	107	36	*a*	*a*	*a*	11	80	190
15	131	3	16	240	71	28	*a*	*a*	*a*	11	97	310
16	52	3	107	240	80	28	*a*	*a*	5	11	70	115
17	21	3	115	220	150	28	*a*	*a*	4	11	45	62
18	30	3	193	165	150	20	*a*	*a*	4	5	45	30
19	100	6	348	220	107	11	*a*	*a*	9	11	28	80
20	92	16	408	220	128	11	*a*	*a*	6	11	28	97
21	71	41	251	165	375	45	4	*a*	5	11	11	162
22	52	25	262	150	410	10	2	*a*	4	5	11	190
23	46	3	221	310	260	4	3	*a*	4	5	11	310
24	41	25	140	310	190	4	*a*	*a*	5	28	11	190
25	35	35	131	240	190	4	*a*	*a*	10	62	11	45
26	25	35	115	175	150	4	*a*	*a*	10	62	28	20
27	21	58	46	150	107	4	*a*	*a*	5	71	28	20
28	16	58	46	117	140	4	*a*	*a*	3	62	45	70
29	12	52	193	117	557	4	*a*	*a*	5	45	97	70
30	*a*	......	326	97	610	4	*a*	*a*	15	45	37	62
31	*a*	......	304	......	400	......	*a*	*a*	......	28	......	97
Mean	52	15	111	255	162	70	......	......	*5	27	48	128

a No reading; gage location dry. * Estimated.

Daily Discharge, in Second-feet, of North Branch, Sandy Creek, at West Rodman

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	97	127	107	72	*a*	*a*	*a*	*a*	*a*	*a*	*a*	......
2......	62	308	97	37	*a*	*a*	*a*	*a*	*a*	*a*	*a*	......
3......	205	260	97	80	*a*	*a*	*a*	*a*	*a*	*a*	*a*	......
4......	165	460	80	225	*a*	*a*	*a*	*a*	*a*	*a*	*a*	......
5......	165	545	107	260	*a*	*a*	*a*	*a*	*a*	*a*	*a*	......
6......	175	409	62	140	*a*	*a*	*a*	*a*	*a*	*a*	*a*	......
7......	409	340	45	107	*a*	*a*	*a*	*a*	*a*	*a*	*a*	......
8......	285	309	45	55	*a*	*a*	*a*	*a*	*a*	*a*	*a*	......
9......	460	309	88	37	*a*	*a*	*a*	*a*	*a*	*a*	*a*	......
10......	570	260	225	12	*a*	*a*	*a*	*a*	*a*	*a*	*a*	......
11......	385	225	385	62	*a*	*a*	*a*	*a*	*a*	*a*	*a*	......
12......	460	225	545	55	*a*	*a*	*a*	*a*	*a*	*a*	5	......
13......	409	190	545	28	*a*	*a*	*a*	*a*	*a*	*a*	5	......
14......	409	150	667	20	*a*	*a*	*a*	*a*	*a*	*a*	5	......
15......	240	117	485	12	*a*	*a*	*a*	*a*	*a*	*a*	5	......
16......	409	80	280	5	*a*	*a*	*a*	*a*	*a*	*a*	5	......
17......	460	62	117	......	*a*	*a*	*a*	*a*	*a*	*a*	5	......
18......	335	45	89	......	*a*	*a*	*a*	*a*	*a*	*a*	5	......
19......	570	37	89	......	*a*	*a*	*a*	*a*	*a*	*a*	12	......
20......	485	28	80	......	*a*	*a*	*a*	*a*	*a*	*a*	90	......
21......	360	225	62	......	*a*	*a*	*a*	*a*	*a*	12	80	......
22......	190	340	45	......	*a*	*a*	*a*	*a*	*a*	28	37	......
23......	205	600	45	......	*a*	*a*	*a*	*a*	*a*	15	28	......
24......	205	545	97	*a*	*a*	*a*	*a*	*a*	*a*	5	12	......
25......	97	510	177	*a*	*a*	*a*	*a*	*a*	*a*	5	5	......
26......	97	225	240	*a*	*a*	*a*	*a*	*a*	*a*	5	5	......
27......	97	165	385	*a*	*a*	*a*	*a*	*a*	*a*	5	5	......
28......	97	127	165	*a*	*a*	*a*	*a*	*a*	*a*	5	5	......
29......	97	......	107	*a*	*a*	*a*	*a*	*a*	*a*	5	5	......
30......	92	......	80	*a*	*a*	*a*	*a*	*a*	*a*	5	5	......
31......	62	......	72	......	*a*	......	*a*	*a*	......	*a*	......	......
Mean...	271	257	184	*42	......	......	......	......	......	*5	*13	*5

a No reading; gage location dry. * Estimated discharge.

Daily Discharge, in Second-feet, of North Branch, Sandy Creek, at West Rodman

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	*a*	225	*a*	12	5	......	......	......	......	......	......	......
2......	*a*	260	*a*	62	5	......	......	......	......	......	......	......
3......	*a*	225	*a*	28	5	......	......	......	......	......	......	......
4......	*a*	140	*a*	12	5	......	......	......	......	......	......	......
5......	*a*	80	*a*	5	5	......	......	......	......	......	......	......
6......	*a*	62	*a*	5	5	......	......	......	......	......	......	......
7......	*a*	5	*a*	5	5	......	......	......	......	......	......	......
8......	*a*	5	*a*	12	5	......	......	......	......	......	......	......
9......	*a*	5	*a*	28	......	......	......	......	......	......	......	......
10......	*a*	12	*a*	12	......	......	......	......	......	......	......	......
11......	*a*	28	*a*	28	......	......	......	......	......	......	......	......
12......	5	45	*a*	45	......	......	......	......	......	......	......	......
13......	5	98	*a*	5	......	......	......	......	......	......	......	......
14......	5	140	*a*	5	......	......	......	......	......	......	......	......
15......	5	190	*a*	5	......	......	......	......	......	......	......	......
16......	5	98	140	5	......	......	......	......	......	......	......	......
17......	5	5	260	5	......	......	......	......	......	......	......	......
18......	5	5	308	5	......	......	......	......	......	......	......	......
19......	5	5	409	5	......	......	......	......	......	......	......	......
20......	5	5	460	5	......	......	......	......	......	......	......	......
21......	5	*a*	360	5	......	......	......	......	......	......	......	......
22......	5	*a*	80	5	......	......	......	......	......	......	......	......
23......	5	*a*	28	28	......	......	......	......	......	......	......	......
24......	5	*a*	12	45	......	......	......	......	......	......	......	......
25......	5	*a*	97	62	......	......	......	......	......	......	......	......
26......	5	*a*	409	28	......	......	......	......	......	......	......	......
27......	5	*a*	308	28	......	......	......	......	......	......	......	......
28......	62	*a*	308	45	......	......	......	......	......	......	......	......
29......	62	......	97	5	......	......	......	......	......	......	......	......
30......	410	......	28	12	......	......	......	......	......	......	......	......
31......	260	......	12	......	......	......	......	......	......	......	......	......
Mean...	43	82	280	17	*5	*10	......	......	......	......	......	......

a No reading; gage location dry. * Estimated. Gage discontinued July 1.

Monthly Discharge of North Branch, Sandy Creek, at West Rodman
[Drainage area, 38 square miles]

DATE	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
1911					
November	272	41	65	1.711	1.91
December	193	35	94	2.474	2.85
1912					
January	192	9	52	1.368	1.57
February	58	3	15	0.394	3.54
March	408	3	111	2.921	3.40
April	690	85	255	6.711	7.49
May	610	28	162	4.263	4.91
June	435	4	70	1.842	2.06
July	10	....	....	....	....
August	....	....	....	....	....
September	15	....	*5	0.132	0.15
October	71	5	27	0.711	0.82
November	150	2	48	1.263	1.41
December	310	20	128	3.368	3.88
1913					
January	570	62	271	7.131	8.22
February	545	28	257	6.731	7.01
March	667	45	184	4.842	5.58
April	260	....	42	1.105	1.23
May	....	....	....	....	....
June	....	....	....	....	....
July	....	....	....	....	....
August	....	....	....	....	....
September	....	....	....	....	....
October	28	....	*5	0.132	0.15
November	90	....	*13	0.345	0.38
December	*5	*5	*5	0.132	0.15
1914					
January	410	....	43	1.132	1.31
February	260	....	82	2.158	2.25
March	460	....	280	7.368	8.49
April	62	5	17	0.447	0.50
May	....	....	*5	0.131	0.14
June	....	....	*10	0.262	0.28

* Estimated.

SALMON RIVER DRAINAGE BASIN

SALMON RIVER

Description

Salmon river rises in the southwestern part of Lewis county, N. Y., and flows southward and then northward, entering Lake Ontario near Port Ontario. Its drainage area comprises about 285 square miles. The topography is generally rolling in character and the soil is sandy, rock lying near the surface in the upper part of the basin, where there are extensive tracts of virgin forest.

The mean annual precipitation is presumably in excess of 40 inches. Records from 9 stations favorably situated above Pulaski give an average of 60.7 inches for 1912 and 53.6 for 1913. During the winter there is usually a heavy fall of snow, which often accumulates in the forest areas to a depth of several feet. The gradual melting of this snow in the spring tends to prevent high freshets.

The basin affords several opportunities for storage and power developments. The Ontario Power Company has constructed a dam just below the Stillwater highway bridge, creating a large storage reservoir and utilizing the natural fall of 110 feet at High falls, a net operating head of 255 feet being developed. One or two other developments farther down the river will be made possible by the increased storage from this reservoir.

A gaging station has been maintained in this river basin near Pulaski from 1900 to 1908 and from 1910 to 1914 inclusive, and at Stillwater near Altmar in 1911, 1912 and 1913.

Salmon River near Pulaski

Location.—At a highway bridge known locally as Fox's bridge, about 2½ miles above the village of Pulaski, about 2½ miles above Trout brook (coming from the left) and 6½ miles above the mouth of the river.

Records available.— September 5, 1900, to June 30, 1907; August 16, 1908, to December 6, 1908; July 14, 1910, to April 30, 1914. Station discontinued May 1, 1914.

Drainage area.— 260 square miles. (Measured on U. S. Geological Survey topographic sheets.)

Gage.—A vertical staff attached to the upstream end of the center pier of the bridge was read from September 5, 1900, to the winter of 1901-2, when it was destroyed by ice. On July 23, 1902, a chain gage was installed, the zero of which is 1.20 feet below the original staff gage zero. Datum of chain gage unchanged since established.

Control.— Gravel; fairly permanent.

Dischage measurements.— Made either by wading or from the bridge.

Winter flow.— Discharge relation affected by ice.

Accuracy.— Open-water curve well developed. Published data considered good.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Daily Gage Height, in Feet, of Salmon River near Pulaski

1914	Jan.	April	1914	Jan.	April	1914	Jan.	April
1	2.95	5.04	12	......	4.06	22	......	4.80
2	2.48	5.05	13	......	4.02	23	......	4.70
3	2.80	5.04	14	......	4.01	24	......	4.35
4	......	4.70	15	......	4.02	25	......	4.10
5	......	4.45	16	......	5.04	26	......	4.60
6	......	4.01	17	......	5.05	27	......	4.60
7	......	3.95	18	......	5.04	28	......	4.40
8	......	4.02	19	......	5.06	29	......	4.30
9	......	5.00	20	......	6.06	30	......	4.40
10	......	4.80	21	......	5.07	31	......	......
11	......	4.50						

Daily Discharge, in Second-feet, of Salmon River near Pulaski

1914	Jan.	April	1914	Jan.	April	1914	Jan.	April
1	312	3,330	12	......	1,980	22	......	2,290
2	112	3,520	13	......	1,410	23	......	2,130
3	235	3,330	14	......	1,290	24	......	1,610
4	......	2,130	15	......	1,410	25	......	1,290
5	......	1,760	16	......	3,330	26	......	1,980
6	......	1,290	17	......	3,520	27	......	1,980
7	......	1,120	18	......	3,330	28	......	1,680
8	......	1,410	19	......	3,710	29	......	1,540
9	......	2,620	20	......	5,650	30	......	1,680
10	......	2,290	21	......	3,900	31	......	......
11	......	1,830						

NOTE.— Daily discharge determined from a fairly well-defined rating curve.

Monthly Discharge of Salmon River near Pulaski
[Drainage area, 260 square miles]

1914	Discharge in Second-feet				Run-off	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
April	5,650	1,120	2,340	9.00	10.04	B

ORWELL BROOK

ORWELL BROOK NEAR ALTMAR

Location.—At highway bridge 1½ miles by road northwest of Altmar and ⅛ mile above the confluence of Orwell brook with Salmon river.

Records available.— June 23, 1911, to December 31, 1914.

Drainage area.— 22.1 square miles. (Measured on U. S. Geological Survey topographic sheets.)

Gage.— Standard chain, attached to downstream side of bridge.

Control.— Composed of small stone and gravel.

Discharge measurements.— Made by wading at low stages, from bridge at high stages.

Winter flow.— No information. Discharge relation probably affected by ice.

Accuracy.— The discharge rating curve is well defined and estimates are good.

Coöperation.— Gage observer employed by the Niagara, Lockport & Ontario Power Company, of Niagara Falls, N. Y. Discharge computed by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Daily Gage Height, in Feet, of Orwell Brook near Altmar

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	2.35	3.60	......	3.70	2.42	2.00	2.25	1.80	2.02	1.90	1.95	3.35
2......	2.35	3.50	......	3.80	2.30	1.95	2.20	1.75	2.00	1.85	2.05	4.10
3......	2.35	3.40	......	3.35	2.30	1.95	2.12	1.75	2.00	1.80	2.00	3.35
4......	2.32	2.62	......	3.10	2.25	2.05	2.00	1.75	2.08	1.80	2.00	2.92
5......	2.30	2.55	......	2.45	2.68	2.02	2.00	1.75	1.95	1.80	2.08	2.80
6......	2.35	2.65	......	2.65	2.68	2.00	1.95	1.75	1.98	1.80	2.08	2.68
7......	2.45	2.60	......	2.60	2.58	2.05	1.90	1.72	2.08	1.80	2.00	2.60
8......	2.45	2.55	......	2.90	2.38	4.20	1.90	1.72	1.98	1.80	2.00	2.50
9......	2.40	2.65	......	3.20	2.35	3.00	1.90	1.70	1.95	1.80	2.10	2.40
10......	2.22	2.65	......	2.98	2.30	2.45	1.85	1.75	1.95	1.88	2.00	2.30
11......	2.58	2.65	......	2.90	2.30	2.35	1.80	1.80	1.95	1.90	2.10	2.20
12......	2.78	2.55	......	2.88	2.30	2.30	1.80	1.70	1.90	1.90	2.10	2.20
13......	2.80	......	......	2.58	2.60	2.20	1.80	1.70	1.85	1.85	2.20	2.20
14......	2.74	......	......	2.78	2.60	2.08	1.80	1.70	1.81	1.80	2.20	2.90
15......	2.70	......	3.15	2.70	2.38	2.00	1.80	1.70	1.80	1.80	2.30	......
16......	2.65	......	3.50	3.40	2.30	2.00	1.78	1.70	1.80	1.85	2.68	......
17......	2.60	......	3.70	3.05	2.25	2.00	1.85	1.74	1.80	2.12	2.45	......
18......	2.55	......	2.75	2.85	2.20	1.98	1.80	1.88	1.80	2.02	2.40	......
19......	2.40	......	2.55	2.80	2.20	2.00	1.80	1.90	1.80	1.95	2.45	......
20......	2.45	......	2.52	2.82	2.15	2.00	1.80	1.90	1.80	1.95	2.40	......
21......	2.50	......	2.45	2.68	2.15	2.00	1.80	2.00	1.75	1.90	2.45	......
22......	2.50	......	2.35	2.52	2.15	2.00	1.80	1.90	1.75	1.90	2.40	......
23......	2.45	......	2.30	2.48	2.22	2.00	1.90	1.85	1.75	1.85	2.32	......
24......	2.40	......	2.30	2.40	2.15	1.95	1.82	1.98	1.75	1.85	2.35	......
25......	2.45	......	2.88	2.45	2.15	1.95	1.80	1.88	1.90	1.85	2.40	......
26......	2.55	......	3.50	2.65	2.10	1.90	1.80	1.80	1.88	1.85	2.45	......
27......	2.62	......	4.70	2.62	2.10	1.85	1.80	1.75	1.90	1.85	2.65	......
28......	2.80	......	4.80	2.52	2.10	1.98	1.75	1.75	2.00	1.86	2.70	......
29......	3.20	......	4.40	2.48	2.05	2.08	1.80	2.28	1.95	1.92	2.60	......
30......	3.60	......	4.00	2.55	2.05	2.40	1.80	2.45	1.90	1.98	2.50	3.20
31......	3.50	......	3.60	......	1.95	......	1.80	2.22	......	1.95	......	......

NOTE.— Discharge relation affected by ice from about January 11 to February 3, February 9 to March 17 and December 14 to 31, inclusive.

Daily Discharge, in Second-feet, of Orwell Brook near Altmar

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	42	......	......	232	49	17	34	9	18	13	15	173
2.....	42	......	......	250	38	15	30	8	17	11	20	307
3.....	42	......	......	173	38	15	24	8	17	9	17	173
4.....	40	68	......	134	34	20	17	8	22	9	17	108
5.....	38	61	......	51	76	18	17	8	15	9	22	91
6.....	42	72	......	72	76	17	15	8	16	9	22	76
7.....	52	66	......	66	64	20	13	7	22	9	17	66
8.....	52	61	......	105	45	327	13	7	16	9	17	56
9.....	47	......	......	149	42	119	13	6	15	9	23	47
10.....	32	......	......	116	38	52	11	8	15	12	17	38
11.....	......	......	......	105	38	42	9	9	15	13	23	30
12.....	......	......	......	102	38	38	9	6	13	13	23	30
13.....	......	......	......	64	66	30	9	6	11	11	30	30
14.....	......	......	......	88	66	22	9	6	9	9	30	......
15.....	......	......	......	78	45	17	9	6	9	9	38	......
16.....	......	......	......	181	38	17	8	6	9	11	76	......
17.....	......	......	......	126	34	17	11	7	9	24	52	......
18.....	......	......	84	98	30	16	9	12	9	18	47	......
19.....	......	......	61	91	30	17	9	13	9	15	52	......
20.....	......	......	58	94	26	17	9	13	9	15	47	......
21.....	......	......	52	76	26	17	9	17	8	13	52	......
22.....	......	......	42	58	26	17	9	13	8	13	47	......
23.....	......	......	38	54	32	17	13	11	8	11	40	......
24.....	......	......	38	47	26	15	10	16	8	11	42	......
25.....	......	......	102	52	26	15	9	12	13	11	47	......
26.....	......	......	198	72	23	13	9	9	12	11	52	......
27.....	......	......	431	68	23	11	9	8	13	11	72	......
28.....	......	......	453	58	23	16	8	8	17	11	78	......
29.....	......	......	368	54	20	22	9	36	15	14	66	......
30.....	......	......	288	61	20	47	9	52	13	16	56	......
31.....	......	......	215	......	15	......	9	32	......	15	......	......
Mean...	*42.9	......	85.6	99.1	37.8	34.8	12.3	12.1	13.0	12.1	38.6	58.2

* January 1 to 10, inclusive.

NOTE.— Daily discharge determined from a well-defined rating curve.

Monthly Discharge of Orwell Brook near Altmar
[Drainage area, 22.1 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January 1–10	....	....	42.9	1.94	0.72	B
February	....	....	....	....	....	.....
March	453	....	85.6	3.87	4.46	C
April	250	47	99.1	4.48	5.00	A
May	76	15	37.8	1.71	1.97	A
June	327	11	34.8	1.57	1.75	B
July	34	8	12.3	0.556	0.64	C
August	52	6	12.1	0.547	0.63	C
September	22	8	13.0	0.588	0.65	C
October	24	9	12.1	0.548	0.63	A
November	78	15	38.6	1.75	1.95	A
December	307	....	58.2	2.63	3.03	C

NOTE.— Mean discharge, March 1 to 17, inclusive, estimated from comparison with nearby streams, 13 second-feet, and for December 14 to 31, inclusive, 32.2 second-feet.

OSWEGO-ONEIDA-SENECA RIVER DRAINAGE BASIN

DESCRIPTION OF BASIN

Oswego river is formed by the union of Seneca and Oneida rivers at Three River Point about twelve miles northwest of Syracuse, N. Y., whence its course is northwestward to Oswego, where it enters Lake Ontario. The length of the river, from the junction to the mouth, is about 20.5 miles and the drainage basin along this distance is a narrow strip of country, moderately rolling. Above the junction of Seneca and Oneida rivers the basin spreads out, attaining an extreme width east and west of about 100 miles and north and south of from 70 to 80 miles. There is, on the whole, a gradual rise from the low, level lands which border Lake Ontario to the north-south ridges which separate the various lakes south of Seneca river and which farther south become merged with the still more elevated country lying along the southern boundary of the Lake Ontario watershed.

The most remarkable feature of the drainage basin is the chain of lakes stretching across its southern border. From west to east the principal lakes are, in order, Canandaigua, Keuka, Seneca, Cayuga, Owasco, Skaneateles and Oneida. These seven lakes include a water-surface of, approximately, 280 square miles, increased by four smaller lakes — Cross, Onondaga, Otisco and

Cazenovia — to about 295 square miles. The larger of the lakes, Oneida, Cayuga and Seneca, are used for steam-towing navigation, having connection with the Erie and Oswego canals. Cayuga and Seneca lakes are noted for their depth and for the abrupt slopes of their beds. The influence of the lakes on Oswego river is of the utmost importance in contributing to the steadiness of its flow.

Drainage Areas Tributary to Oneida Lake and Oneida River *

LOCALITY	AREA IN SQUARE MILES		
	Place to place	Sub-total	Total
East branch, Fish creek.			
Head to junction with Alder creek	45.40	45.40	
Alder creek	25.70	71.10	
Junction with Alder creek to junction with Point Rock creek.	36.70	107.80	
Point Rock creek	19.90	127.70	
Junction with Point Rock creek to junction with Fall brook.	4.50	132.20	
Fall brook	13.50	145.70	
Junction with Fall brook to junction with Florence creek	1.30	147.00	
Florence creek	20.40	167.40	
Junction with Florence creek to junction with Furnace creek (Taberg)	1.70	169.10	
Furnace creek	14.40	183.50	
Taberg to junction with West branch, Fish creek	3.60	187.10	
West branch, Fish creek.			
Head to lower dam, Williamston	25.80	25.80	
Williamston to West Camden	27.10	52.90	
West Camden to junction with Mad river, Camden	14.20	67.10	
Mad river	45.40	112.50	
Camden to junction with Little river	21.60	134.10	
Little river	52.10	186.20	
Little river to McConnellsville	4.00	190.20	
McConnellsville to junction with East branch, Fish creek	11.90	202.10	
Junction of East and West branches, Fish creek, to junction with Wood creek	27.80	389.20	417.00
Wood creek.			
Above Erie canal, Rome	10.20	10.20	
Erie canal, Rome, to junction with Mud creek	2.00	12.20	
Mud creek	20.00	32.20	
Junction with Mud creek to junction with Canada creek	6.40	38.60	
Canada creek	31.00	69.60	
Junction with Canada creek to junction with Stony creek	1.20	70.80	
Stony creek	20.40	91.20	
Junction with Stony creek to junction with Fish creek	31.40	122.60	122.60
Oneida creek.			
Head to Peterboro	13.40	13.40	
Peterboro to falls	6.70	20.10	
Falls to Munnsville	15.60	35.70	
Munnsville to Kenwood	27.30	63.00	
Kenwood to Oneida Castle (State dam)	10.80	73.80	
Oneida Castle to Sconondoa creek, Oneida	2.10	75.90	
Sconondoa creek	34.30	110.20	
Sconondoa creek to Durhamville	4.80	115.00	
Durhamville to mouth	28.00	143.00	143.00
Canaseraga creek.			
Head to Perryville	5.70	5.70	
Perryville to Erie canal	9.00	14.70	
Erie canal to Douglas ditch	8.10	22.80	
Cowassalon creek.			
Head to Clockville creek	17.20	17.20	
Clockville creek	11.10	28.30	
Clockville creek to Erie canal	5.50	33.80	
Erie canal to mouth of Douglas ditch	39.30	73.10	
Junction with Douglas ditch to Lakeport	3.20	95.90	99.10

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* From U. S. Geological Survey topographic maps.

Drainage Areas Tributary to Oneida Lake and Oneida River — (Concluded)

LOCALITY	AREA IN SQUARE MILES		
	Place to place	Sub-total	Total
Chittenango creek.			
Erieville reservoir, water-surface	0.45	0.45	
Erieville reservoir, land drainage	3.30	3.75	
Erieville reservoir to Cazenovia lake	30.50	34.25	
Cazenovia lake, water-surface	1.70	35.95	
Cazenovia lake, land drainage	8.70	44.65	
Cazenovia lake to Chittenango falls	14.40	59.05	
Chittenango falls to State dam, Chittenango	17.90	76.95	
State dam to junction with Butternut creek	28.10	105.05	
Butternut creek.			
Head to Jamesville reservoir	47.40	47.40	
Jamesville reservoir to State dam	5.70	53.10	
State dam to junction with Limestone creek	19.20	72.30	
Limestone creek.			
De Ruyter reservoir, water-surface	1.00	1.00	
De Ruyter reservoir, land drainage	17.80	18.80	
De Ruyter reservoir to junction with East branch	4.30	23.10	
East, or New Woodstock branch	12.60	35.70	
Junction with East branch to junction with West branch	34.50	70.20	
West branch, Limestone creek, enters above State feeder dam	24.80	95.00	
State dam to junction with Butternut creek	18.20	113.20	185.50
Junction with Limestone creek to Chittenango creek	1.10	186.60	291.65
Chittenango creek, junction with Butternut creek to Bridgeport	30.30	321.95	
Chittenango creek, Bridgeport to Oneida lake	4.30	326.25	326.25
Oneida lake drainage through main streams	....	1,107.95	
Big Bay creek	26.30		
Little Bay creek	11.50		
Scriba creek	45.40		
Coast drainage, north shore Oneida lake	54.50		
Coast drainage, south shore Oneida lake	28.90	166.60	1,274.55
Water-surface, Oneida lake	78.00		
Land drainage, Oneida lake	1,274.55	1,352.55	
Oneida river.			
Brewerton to Caughdenoy creek	4.80	4.80	1,357.90
Caughdenoy creek	19.30	24.10	1,376.70
Caughdenoy creek to Oak Orchard	25.10	49.20	1,401.80
Mud creek	34.70	83.90	1,436.50
Oak Orchard to Potts creek	5.00	88.90	1,441.50
Potts creek	22.90	111.80	1,464.40
Six-Mile creek	24.00	135.80	1,488.40
Potts creek to Three River Point	4.50	140.30	1,492.90

Drainage Areas Tributary to Seneca River *

LOCALITY	AREA IN SQUARE MILES			
	Place to place	Sub-total	Branch total	General total
Mud creek.				
Head to and including Schaffer creek	51.31			
Junction with Schaffer creek to junction with Sucker brook, Victor (formerly Ganargua creek)	25.70	77.01		
Sucker brook	20.15	97.16		
Ganargua creek.				
Victor to Erie canal, Macedon	26.20	123.36		
Macedon to junction with East Red creek, East Palmyra	55.00	178.36		
East Red creek	59.50	237.86		
East Red creek to Canandaigua outlet	61.37	299.23	299.23	

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* From U. S. Geological Survey topographic maps.

Drainage Areas Tributary to Seneca River — (Continued)

LOCALITY	AREA IN SQUARE MILES			
	Place to place	Sub-total	Branch total	General total
Canandaigua lake.				
Naples creek	48.55	171.97		
West river	42.08			
Other land drainage	81.34			
Water-surface	16.40	....	188.37	
Canandaigua outlet.				
Foot of lake to and including Black brook	50.37	238.74		
Black brook to Flint creek, at Phelps	54.34	293.08	293.08	
Flint creek.				
Above Patten	31.59			
Patten to Gorham, not including Gorham swamp	24.84	56.43		
Gorham swamp	5.46	61.89		
Gorham to Orleans	25.57	87.46		
Orleans to junction with Canandaigua outlet at Phelps	15.21	102.67	395.75	
Phelps to junction with Ganargua creek at Lyons, forming Clyde river	48.36	444.11	743.34	
Clyde river.				
Lyons to junction with Seneca river, foot of Cayuga lake	141.11	884.45	....	884.45
Seneca river.				
Seneca lake.				
Keuka lake.				
Land drainage to outlet	160.96			
Water-surface	17.51	178.47	640.93	
Keuka outlet to Seneca lake	24.80	203.27		
Catharine creek.				
Above Montour Falls	66.46	....		
Montour Falls to Seneca lake	29.91	96.37		
Watkins Glen creek	23.53	23.53		
Direct lake drainage	317.76	317.76		
Water-surface	67.16	....	708.09	
Seneca river, foot of Seneca lake to Waterloo	40.90	....	748.99	
Seneca river, Waterloo to Seneca Falls	28.55	....	777.54	
Seneca river, Seneca Falls to Mud lock, foot of Cayuga lake	7.52	....	785.06	
Cayuga lake.				
Cascadilla creek	14.38			
Six-Mile creek	59.05			
Buttermilk creek	29.16			
Cayuga inlet	67.02			
Salmon creek	91.13			
Fall creek.				
Above Freeville	58.68			
Virgil creek	26.00	84.68		
Freeville to Cornell dam	30.62	115.20		
Cornell dam to Cayuga lake	1.56	116.76		
Taghanic creek.				
Above Halseyville	56.96			
Halseyville to Taghanic Falls	10.40	67.36		
Taghanic Falls to Cayuga lake	0.39	67.75		
Other Cayuga lake drainage	275 04	720.29		
Cayuga lake, water-surface	66.31	786.60	1,571.60	
Seneca river, Cayuga lake to junction with Clyde river	15.42	....	1,587.02	2,471.47
Seneca river, junction with Clyde river to junction with Owasco outlet	146.23	....	....	2,617.70
Owasco lake.				
Owasco inlet, above Moravia	74.33			
Moravia to Owasco lake	42.92	117.25		
Direct drainage to lake	76.24	193.49		
Foot of lake to State dam	0.98	194.47		
Water-surface	10.40	204.87		
Owasco outlet to junction with Seneca river	16.73	221.66	....	2,839.30
Seneca river, junction with Owasco outlet to junction with Skaneateles outlet	98.70	....	....	2,938.00
Skaneateles lake.				
Land drainage to foot	58.41			
Water-surface	14.13	72.54		

Drainage Areas Tributary to Seneca River—(Concluded)

LOCALITY	AREA IN SQUARE MILES			
	Place to place	**Sub-total**	**Branch total**	**General total**
Skaneateles lake — (Continued).				
Foot of lake to Willow Glen	1.84	74.38		
Willow Glen to Seneca river	16.69	91.07	....	3,029.07
Seneca river, Skaneateles outlet to Carpenter brook	25.50	....	....	3,054.57
Carpenter brook	18.70	....	....	3,073.27
Seneca river, Carpenter brook to Baldwinsville	48.10	....	....	3,121.37
Seneca river, Baldwinsville to Onondaga outlet	17.80	....	....	3,139.17
Onondaga lake.				
Otisco lake, land drainage to foot	41.40			
Otisco lake, water-surface	3.30	44.70		
Nine-Mile creek (Otisco outlet) to Onondaga lake	74.00	118.70		
Onondaga creek.				
Above junction with West brook	40.60			
Junction with West brook to inflow to Onondaga lake	65.30	105.90		
Other land drainage to Onondaga lake	59.10	283.70		
Onondaga lake, water-surface	4.70	288.40		
Onondaga lake, outlet to Seneca river	3.00	291.40	....	3,430.57
Seneca river, Onondaga outlet to Belgium	10.12	....	....	3,440.69
Seneca river, Belgium to Three River Point	4.40	....	....	3,445.09

Drainage Areas Tributary to Oswego River *

LOCALITY	AREA IN SQUARE MILES		
	Place to place	**Total from Three River Point**	**Total drainage basin**
Oneida river, above Three River Point	....	....	1,493.00
Seneca river, above Three River Point	....	....	3,445.00
Oswego river at Three River Point	....	....	4,938.00
Three River Point to Phoenix	2.32	2.32	4,940.32
Phoenix to Hinmansville	17.58	19.90	4,957.90
Hinmansville to Ox creek	17.05	37.15	4,975.15
Ox creek	33.68	70.83	5,008.83
Ox creek to upper dam, Fulton	9.15	79.98	5,016.98
Fulton to Neatawanta creek	9.15	89.13	5,027.13
Neatawanta creek	21.92	111.05	5,049.05
Neatawanta creek to Black creek	1.01	112.06	5,050.06
Black creek	37.93	149.99	5,087.99
Black creek to Battle Island	0.92	150.91	5,088.91
Battle Island to Minetto	2.11	153.02	5,091.02
Minetto to High dam	4.87	157.89	5,095.89
High dam to Oswego dam	1.22	159.11	5,097.11
Oswego dam to Lake Ontario	1.21	160.32	5,098.32

* From U. S. Geological Survey topographic maps.

OSWEGO RIVER

DESCRIPTION

The drainage area tributary to Oswego river, exclusive of Seneca and Oneida rivers, is 160 square miles. This area comprises chiefly moderately-rolling, cultivated upland, having a good depth of soil overlying the rock, which, as a rule, is visible only in the bed of the stream. A portion of the area is drained through lakes and marshes. The run-off from the direct drainage to Oswego river is moderate and the regimen differs but little from that resulting from the inflow of the two main tributaries — the Oneida and Seneca.

The river is canalized for practically its entire length by the Barge canal improvement and almost all of the 118.6 feet drop between canal pool at Three River Point and low water in Lake Ontario occurs at six dams, all having bulkhead gates for power purposes, the upper two of which have large Taintor gates for surface regulation. The Battle Island dam and old High dam have been drained out by new structures — dam No. 5 at Minetto and dam No. 6 (new High dam) above Oswego, respectively.

OSWEGO RIVER WATER-SURFACE RECORDS

In the following series of tables there are given records of the daily elevation of water-surface of the Oswego river at different gaging stations during the year 1914, together with certain records during previous years, which have not heretofore been published. Owing to the completion of canal construction the locations at which certain water-surface elevations were taken have been shifted, in general to locations on the finished structures, where in some cases elevations had also been taken. In such cases the gagings for 1914 at the old location are published, to conclude that record, and also, when possible, earlier gagings at the new location are published as the beginning of a new record. Locations of old and new gages and reasons for change are briefly noted.

The tables of elevations of water-surface are arranged in order, proceeding upstream from Lake Ontario to Three River Point. The water-surface is in general read to the nearest tenth of a foot, usually either on a staff gage or by measuring down from a reference point.

LAKE ONTARIO AT MOUTH OF OSWEGO RIVER

This gaging station is located in the mouth of the Oswego river in the harbor at Oswego and indicates very closely the lake level, except during times of large flow in the Oswego river, when there will be some slight slope below the gage. It was established December, 1907, and is located on the east side of the river below Bridge street bridge, the bridge nearest the lake. The lower gage in new lock No. 8 is now used.

Daily Elevation of Water-surface (B. C. Datum) of Lake Ontario at Mouth of Oswego River

1908	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	249.01	......	249.86	249.51	249.09	......	247.71	......	246.71
2	247.54	......	......	......	......	......	249.41	......	......	......	......	246.76
3	......	......	......	249.01	......	249.76	249.51	......	......	......	......	......
4	......	......	248.06	......	......	249.66	......	......	248.41	......	......	......
5	......	......	......	......	......	249.61	......	......	......	......	247.01	246.51
6	......	248.49	......	248.91	......	249.56	249.41	......	......	......	......	......
7	......	......	......	......	......	......	......	249.13	......	......	......	......
8	......	......	......	248.91	249.41	249.56	......	......	......	......	......	246.51
9	......	......	......	......	......	249.49	......	......	......	......	......	......
10	......	......	......	......	......	249.69	......	......	......	......	......	246.31
11	247.56	......	......	......	......	249.61	......	......	248.21	......	......	......
12	......	......	248.21	......	......	249.51	......	......	......	......	......	......
13	......	......	......	......	......	249.56	......	249.21	......	......	......	......
14	247.71	247.70	248.41	249.01	......	......	......	......	......	......	......	......
15	......	......	......	......	......	249.71	......	248.66	......	......	......	246.51
16	......	......	248.61	249.01	249.61	249.56	......	......	......	......	......	......
17	......	248.41	......	......	......	249.50	......	......	......	......	......	......
18	247.51	......	248.71	249.06	......	249.56	......	......	......	......	246.71	246.21
19	......	248.01	......	......	......	......	......	......	......	......	246.61	......
20	......	......	......	......	......	......	......	......	......	......	......	......
21	......	......	......	249.26	......	......	......	......	......	......	246.56	......
22	......	......	......	......	......	......	......	248.46	247.81	......	......	246.31
23	......	......	248.66	249.06	249.81	249.51	......	......	......	......	......	......
24	247.76	......	......	......	......	249.54	......	249.31	......	......	......	246.30
25	......	......	248.76	248.91	......	249.57	......	......	......	......	......	......
26	......	......	......	......	......	249.61	......	......	......	......	......	246.51
27	......	......	248.66	......	......	249.46	......	......	......	......	......	......
28	......	248.11	......	......	249.51	......	......	......	......	......	......	......
29	......	......	......	......	......	249.61	......	......	......	......	......	247.31
30	......	......	248.54	249.01	......	249.46	......	......	......	......	......	......
31	......	......	......	......	......	......	......	249.16	......	247.21	......	246.61

Daily Elevation of Water-surface (B. C. Datum) of Lake Ontario at Mouth of Oswego River

1909	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	246.80	247.00	......	......	......	......	247.41	......	246.51	246.31
2	......	......	......	......	......	......	......	248.01	......	......	......	246.31
3	......	......	246.70	......	......	......	......	......	......	......	246.61	246.36
4	247.31	......	......	......	......	......	......	......	......	246.96	246.76	246.31
5	......	......	247.00	247.10	......	......	......	......	......	246.96	246.61	246.36
6	246.41	......	246.60	......	......	......	248.21	......	......	246.91	246.56	246.41
7	......	......	......	247.10	......	248.50	......	248.01	247.51	246.91	......	246.16
8	246.11	246.50	246.80	......	......	......	......	......	......	246.91	246.46	246.26
9	......	......	......	......	......	248.20	......	......	247.41	246.91	246.36	246.31
10	......	......	......	247.40	......	......	......	......	......	......	246.36	246.26
11	246.90	......	......	......	......	......	......	......	247.41	......	246.26	246.16
12	......	......	246.60	......	......	......	......	248.01	......	246.96	246.41	246.36
13	246.90	246.50	......	......	248.91	......	......	......	247.11	246.91	246.36	246.21
14	......	......	......	......	......	......	248.21	......	......	246.91	......	246.26
15	246.30	......	246.90	247.40	248.21	248.20	......	......	......	246.96	......	246.31
16	......	......	......	......	......	......	......	......	......	246.86	......	246.41
17	......	......	......	247.30	......	248.20	......	......	......	......	246.42	246.21
18	......	246.50	246.80	......	248.51	......	......	247.91	......	......	246.50	246.31
19	246.00	......	......	247.40	......	248.30	248.21	......	......	246.81	246.56	246.26
20	......	......	246.70	......	248.36	......	......	......	......	246.81	246.20	246.31
21	......	......	......	......	......	248.20	248.11	......	......	246.86	246.16	246.21
22	......	......	......	247.70	......	......	......	......	......	246.86	246.16	246.31
23	......	246.50	246.70	......	......	248.30	......	......	......	246.76	246.31	246.21
24	......	......	......	247.70	......	......	......	......	......	......	246.51	246.26
25	......	247.10	......	......	......	248.30	......	247.71	......	246.76	246.61	246.21
26	......	......	247.00	......	248.41	......	......	......	......	246.61	246.51	246.16
27	......	246.70	......	......	......	......	248.11	......	......	......	246.61	246.21
28	246.40	......	......	......	......	......	......	......	......	246.81	246.51	246.31
29	......	......	......	......	......	......	......	......	......	246.81	246.41	246.21
30	......	......	......	......	......	......	248.01	247.41	......	......	246.21	246.11
31	......	......	......	......	......	......	......	......	......	......	......	246.11

Daily Elevation of Water-surface (B. C. Datum) of Lake Ontario at Mouth of Oswego River

1910	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	246.21	246.11	......	247.11	......	247.46	247.50	247.30	246.95	246.60	246.30	246.20
2	246.21	246.11	246.41	247.11	......	......	247.50	247.40	246.80	246.50	246.40	246.20
3	246.21	246.11	246.71	247.06	......	247.60	247.45	247.30	246.90	246.30	246.30	246.20
4	246.21	246.11	246.61	247.11	......	247.55	247.40	247.30	246.70	246.50	246.30	246.20
5	246.21	246.11	246.61	247.01	......	247.45	247.40	247.50	246.80	246.50	246.30	246.20
6	246.21	246.11	246.66	247.31	......	247.50	247.40	247.40	247.00	246.40	246.50	246.10
7	246.21	246.91	247.21	247.21	......	247.50	247.40	247.40	247.00	246.60	246.40	246.20
8	246.21	246.81	247.21	247.11	......	247.55	247.40	247.20	247.05	246.70	246.20	246.20
9	246.21	246.91	247.31	247.21	......	247.60	247.40	247.00	246.90	246.70	246.20	246.00
10	246.01	246.21	247.21	247.11	......	247.60	247.40	247.10	247.00	246.60	246.40	246.00
11	246.11	246.11	247.21	247.01	247.56	247.50	......	247.20	247.00	246.50	246.30	245.95
12	246.11	246.21	247.31	247.06	247.51	247.75	247.30	247.30	246.80	246.70	246.30	246.00
13	246.11	246.11	247.31	247.06	247.46	247.60	247.30	247.20	246.90	246.50	246.60	246.05
14	246.11	246.11	247.41	247.11	247.56	247.60	247.30	247.00	246.85	246.50	246.30	246.15
15	246.01	246.11	......	247.11	247.51	247.50	247.30	247.10	246.90	246.60	246.40	246.00
16	246.11	246.11	......	247.16	247.56	247.50	247.30	247.10	246.90	246.60	246.40	246.05
17	246.11	246.11	247.16	247.16	247.41	247.60	247.30	247.20	246.80	246.50	246.40	246.10
18	246.11	246.11	247.21	247.11	247.36	247.50	247.30	247.00	246.80	246.50	246.30	246.00
19	246.01	246.01	247.20	247.11	247.46	247.50	247.30	247.10	246.80	246.40	246.30	246.00
20	245.91	246.01	247.11	247.11	247.41	247.50	247.30	247.10	246.70	246.30	246.40	245.90
21	245.91	246.21	247.01	247.06	247.46	247.60	247.30	247.20	246.80	246.40	246.20	246.00
22	245.71	246.01	247.01	247.11	247.51	247.55	247.30	247.20	246.60	246.50	246.20	245.90
23	246.06	246.01	247.11	247.06	247.41	247.60	247.30	247.10	246.60	246.50	246.10	246.40
24	246.01	246.01	247.01	247.11	247.51	247.60	247.30	247.00	246.60	246.50	246.40	246.05
25	246.11	......	247.11	247.06	247.76	247.55	247.30	247.10	246.60	246.40	246.10	246.00
26	245.81	......	247.11	247.21	247.51	247.60	247.30	247.10	246.50	246.30	246.30	245.85
27	246.01	......	247.11	247.26	247.46	247.50	247.40	247.00	246.36	246.30	246.20	245.75
28	246.11	......	247.26	247.11	247.51	247.50	247.40	247.00	246.40	246.40	246.00	245.70
29	246.11	......	247.06	247.11	247.46	247.50	247.40	246.90	246.40	246.50	246.20	246.00
30	246.21	......	247.31	247.11	247.51	247.50	247.40	246.80	246.40	246.30	246.30	245.85
31	246.11	......	247.11	......	247.61	......	247.40	246.95	......	246.30	......	245.60

Daily Elevation of Water-surface (B. C. Datum) of Lake Ontario at Mouth of Oswego River

1911	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	245.65	245.80	246.15	246.60	246.80	246.80	246.70	246.40	245.90	245.60	245.80	245.60
2.....	245.65	245.90	246.00	246.65	247.00	246.70	246.80	246.30	246.00	246.00	245.70	245.90
3.....	245.80	246.00	246.00	246.40	246.90	246.80	246.80	246.40	246.00	245.50	245.80	245.60
4.....	245.90	245.90	246.00	246.20	246.90	246.60	*a*	246.40	246.30	245.90	245.60	245.90
5.....	246.40	246.10	246.20	246.30	246.80	246.70	246.70	246.40	246.00	245.80	245.70	245.80
6.....	245.80	245.80	246.20	246.35	246.80	246.70	246.60	246.30	246.20	245.80	245.50	245.70
7.....	245.80	245.70	245.90	246.80	246.80	246.80	246.70	246.40	246.00	245.80	245.60	245.60
8.....	245.90	245.70	245.85	246.80	246.80	246.70	246.70	246.50	246.00	245.60	245.70	245.50
9.....	246.20	245.80	245.80	246.90	246.80	246.70	246.60	246.50	246.00	245.70	245.70	245.50
10.....	245.90	246.00	246.05	247.00	246.70	246.80	246.60	246.70	246.00	245.70	245.50	245.60
11.....	246.00	246.00	246.90	246.80	246.80	246.90	246.60	246.60	246.00	245.70	245.50	245.70
12.....	245.95	245.95	245.90	246.70	246.90	246.90	246.70	246.20	246.10	245.80	245.40	245.80
13.....	246.00	245.90	246.15	246.80	246.80	246.90	246.70	246.40	245.90	245.80	245.90	245.90
14.....	245.90	245.90	246.05	246.70	246.70	246.90	246.70	246.30	246.00	245.70	245.60	245.90
15.....	245.90	245.50	246.05	246.90	246.80	247.00	246.40	246.20	245.70	245.60	245.70	245.80
16.....	246.00	245.70	246.50	247.00	246.70	246.90	246.50	246.30	246.00	245.70	245.70	245.80
17.....	245.90	245.80	246.10	247.00	246.80	246.80	246.60	246.30	245.90	245.50	245.60	246.00
18.....	245.90	245.90	246.25	246.90	246.60	246.70	246.60	246.40	245.90	245.60	245.70	246.00
19.....	246.05	246.00	246.10	247.00	246.60	246.80	246.50	246.50	245.80	245.60	246.10	246.00
20.....	245.90	245.80	246.20	247.00	246.60	246.90	246.60	246.30	246.00	245.70	245.60	246.00
21.....	246.00	246.10	246.30	246.90	246.70	246.90	246.50	246.20	245.70	245.80	245.80	245.80
22.....	245.90	246.10	246.10	246.70	246.70	246.80	246.70	246.10	245.90	245.70	245.70	245.90
23.....	245.70	246.10	246.40	246.90	246.60	246.90	246.70	246.30	245.90	245.80	245.50	245.90
24.....	245.90	246.10	246.30	246.90	246.60	247.00	246.60	246.20	245.80	245.70	245.70	245.90
25.....	245.80	246.00	246.10	246.80	246.60	246.60	246.70	246.40	246.10	245.70	245.80	*a*
26.....	245.80	246.00	246.05	246.80	246.90	246.70	246.60	246.30	245.90	245.70	245.70	245.90
27.....	245.90	245.90	246.20	246.80	246.70	246.70	246.60	246.00	245.80	245.60	245.60	245.90
28.....	246.10	246.00	246.70	246.90	246.70	246.80	246.50	246.10	245.90	245.60	245.60	246.00
29.....	244.90	......	246.40	246.80	246.70	246.70	246.40	246.20	245.20	245.60	245.80	245.90
30.....	246.80	......	246.50	246.70	246.70	246.80	246.50	246.00	245.90	245.50	245.70	245.90
31.....	245.90	......	246.70	......	246.70	......	246.40	246.00	......	245.60	......	245.80

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Lake Ontario at Mouth of Oswego River

1912	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	*a*	245.70	246.30	247.00	248.00	248.50	248.20	247.80	247.50	247.50	247.00	247.10
2.....	245.90	245.90	246.50	247.10	247.80	248.50	248.20	247.80	247.40	247.40	247.20	247.00
3.....	246.00	245.90	246.20	247.30	248.00	248.60	248.10	247.90	247.50	247.30	247.10	247.20
4.....	246.00	246.00	246.20	247.25	247.90	248.70	248.10	247.90	247.30	247.40	247.00	247.30
5.....	245.90	246.20	246.20	247.35	247.70	248.70	248.10	247.80	247.40	247.40	247.00	247.00
6.....	245.50	246.00	246.10	247.55	247.80	248.60	248.20	247.80	247.60	247.30	247.00	247.40
7.....	246.00	245.80	246.20	247.85	247.90	248.50	248.10	247.70	247.50	247.50	247.20	247.50
8.....	245.90	246.00	246.10	247.90	247.80	248.50	248.00	247.70	247.60	247.40	247.10	247.40
9.....	246.00	246.00	246.10	247.75	247.90	248.50	248.10	247.60	247.60	247.10	247.10	247.40
10.....	246.00	246.20	245.80	247.90	247.90	248.50	248.20	247.70	247.60	247.00	247.20	247.20
11.....	245.60	*a*	245.80	247.90	247.70	248.50	248.10	247.80	247.50	247.20	247.10	247.30
12.....	245.70	246.00	246.00	247.90	247.60	248.40	248.20	247.80	247.40	247.10	247.20	247.50
13.....	246.50	245.90	246.00	247.95	248.00	248.50	247.90	247.70	247.40	247.20	247.00	247.30
14.....	246.80	245.70	246.10	247.80	248.20	248.40	248.00	247.90	247.50	247.20	247.10	247.10
15.....	246.40	245.60	245.80	248.05	248.50	248.30	248.10	247.80	247.20	247.30	247.30	247.00
16.....	246.30	245.50	246.00	248.00	247.70	248.30	248.00	247.80	247.40	247.20	247.30	247.20
17.....	246.30	245.60	246.00	247.90	247.80	248.50	247.90	247.80	247.50	247.00	247.40	247.10
18.....	246.30	245.70	246.60	247.95	248.00	248.40	247.90	247.70	247.40	247.10	247.20	247.10
19.....	246.30	245.90	246.60	248.15	248.10	248.40	247.90	247.60	247.50	247.30	247.20	247.50
20.....	245.70	245.80	247.70	248.10	247.50	248.40	248.00	247.50	247.60	247.20	247.20	247.20
21.....	245.70	245.70	247.60	248.10	248.10	248.40	248.00	247.30	247.30	247.30	247.10	247.30
22.....	245.70	246.00	247.50	247.95	248.30	248.30	248.00	247.50	247.40	247.00	247.00	247.35
23.....	245.70	246.40	247.20	248.20	248.20	248.30	248.20	247.70	247.50	247.10	247.00	247.50
24.....	246.30	246.00	247.00	248.15	248.40	248.40	248.10	247.80	247.40	247.20	247.00	247.35
25.....	246.00	245.90	247.00	247.95	248.30	248.30	248.00	247.70	247.30	247.10	247.30	247.40
26.....	245.60	*a*	246.70	247.85	248.20	248.40	247.90	247.80	247.30	247.20	247.20	247.35
27.....	246.00	246.30	246.40	247.95	248.30	248.40	*a*	247.80	247.60	247.20	247.20	247.35
28.....	245.70	245.50	246.80	247.90	248.30	248.30	247.80	247.80	247.50	247.30	247.20	247.30
29.....	245.60	246.30	246.70	247.95	248.30	248.30	247.90	247.60	247.60	247.10	247.10	247.20
30.....	245.60	......	246.60	248.00	248.50	248.30	247.90	247.50	247.40	247.30	247.40	247.20
31.....	245.70	......	246.75	......	248.50	......	247.90	247.60	......	247.30	......	247.25

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Lake Ontario at Mouth of Oswego River

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	247.03	248.38	247.28	249.08	249.03	249.00	248.90	248.40	248.20	247.40	247.10	247.00
2......	246.88	248.28	247.48	248.88	248.98	249.10	248.90	248.60	248.10	247.50	247.10	247.00
3......	246.98	247.88	247.28	248.78	248.93	249.20	248.90	248.40	248.10	247.40	247.00	247.10
4......	246.93	248.08	247.38	249.08	248.98	249.10	*a*	248.60	248.00	247.40	247.00	247.10
5......	247.08	247.88	247.68	248.98	248.93	248.90	248.80	248.60	247.90	247.30	247.10	247.00
6......	247.03	247.98	247.58	249.08	248.98	249.20	249.00	248.50	247.90	247.40	247.00	247.10
7......	247.18	248.08	247.78	249.18	248.93	249.30	249.00	248.50	247.90	247.40	247.00	247.10
8......	247.08	247.88	247.68	249.08	248.88	249.20	249.10	248.40	247.90	247.50	247.00	247.20
9......	247.28	247.98	247.38	248.98	248.93	249.10	248.00	248.50	247.80	247.50	247.10	247.00
10......	247.48	249.13	247.48	248.88	248.98	249.10	248.90	248.20	247.90	247.40	247.30	247.00
11......	247.48	248.98	247.48	248.88	248.88	249.10	249.00	248.40	247.90	247.40	247.40	247.10
12......	247.48	247.88	247.48	249.08	248.98	249.00	248.90	248.40	247.80	247.60	247.30	247.10
13......	247.58	247.98	247.58	248.98	248.93	248.90	249.00	248.50	247.90	247.50	246.90	247.10
14......	247.28	247.78	247.68	248.98	248.98	249.00	249.00	248.30	247.90	247.50	247.00	247.00
15......	247.38	247.88	247.83	248.98	248.93	248.80	248.90	248.40	247.80	247.30	247.00	247.00
16......	247.58	247.88	247.98	249.03	248.88	248.90	249.00	248.20	247.70	247.10	247.00	247.00
17......	247.53	248.08	247.93	248.98	248.93	249.00	248.80	248.40	247.70	247.20	247.00	246.90
18......	247.58	248.68	247.73	248.98	248.88	249.00	248.90	248.30	247.60	247.30	247.10	247.00
19......	247.78	248.48	247.78	249.18	248.98	248.90	248.70	248.30	247.60	247.30	247.10	247.00
20......	247.68	247.88	247.68	249.08	248.93	248.90	248.90	248.20	247.50	247.30	247.20	246.90
21......	247.78	247.78	247.68	248.98	248.88	248.80	248.70	248.00	247.50	247.50	247.10	246.90
22......	247.78	247.68	247.68	249.08	248.98	248.90	248.60	248.20	247.50	247.30	247.00	247.00
23......	247.58	247.88	247.78	249.18	248.98	248.90	248.70	248.30	247.60	247.10	247.00	246.90
24......	247.68	247.68	247.78	249.08	249.03	249.00	248.80	248.20	247.70	247.30	247.10	246.90
25......	247.78	247.68	247.88	248.98	248.98	249.00	248.50	248.20	247.70	247.30	247.20	247.00
26......	247.68	247.58	247.88	248.98	248.93	248.90	248.70	248.10	247.60	247.30	247.10	247.00
27......	247.58	247.78	248.43	249.03	248.78	248.90	248.60	248.20	247.70	247.20	247.20	247.10
28......	247.78	247.68	248.68	248.98	249.13	249.00	248.50	248.10	247.60	247.10	247.00	247.10
29......	247.98	......	248.68	249.03	249.13	248.90	248.60	248.30	247.60	247.40	247.00	246.90
30......	247.88	......	248.68	248.98	*a*	249.00	248.40	248.20	247.50	247.30	247.10	246.90
31......	247.78	......	248.88	......	249.08	......	248.40	248.30	......	247.30	......	246.80

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Lake Ontario at Mouth of Oswego River

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	246.90	246.70	248.20	247.20	248.10	248.00	247.90	247.60	246.10	246.20	246.00	246.20
2......	246.80	246.70	247.90	248.00	248.10	248.00	247.90	247.60	*a*	246.30	246.20	246.20
3......	246.70	246.80	248.00	248.10	248.20	248.00	247.90	247.50	247.70	246.90	246.40	246.20
4......	246.90	246.90	247.50	248.10	248.10	248.00	247.90	247.40	247.70	246.90	246.40	246.20
5......	246.80	246.90	247.00	248.10	248.10	248.00	247.90	247.40	247.60	246.00	246.60	246.30
6......	246.70	246.80	246.90	248.20	248.10	248.10	247.90	247.40	247.50	246.00	247.00	246.20
7......	246.80	246.90	247.00	248.10	248.20	248.00	247.80	247.40	247.40	246.20	247.40	246.30
8......	246.90	246.80	246.90	248.40	248.20	248.10	247.80	*a*	247.20	246.20	247.20	246.20
9......	246.80	246.80	247.00	248.20	248.10	248.00	247.80	*a*	247.90	246.20	247.20	246.20
10......	246.90	246.70	246.70	248.40	248.10	248.00	247.90	*a*	247.40	246.30	247.60	246.30
11......	246.80	246.60	246.60	248.30	248.10	248.00	247.80	*a*	247.20	246.00	247.60	246.20
12......	246.70	247.20	246.70	248.40	248.00	248.10	247.80	*a*	247.00	246.20	247.60	246.20
13......	246.80	247.50	246.60	248.30	248.10	248.10	247.80	*a*	247.20	246.20	247.60	246.30
14......	246.60	248.00	246.70	248.20	248.10	248.00	247.70	*a*	247.00	246.20	247.20	246.20
15......	246.50	248.80	246.70	248.10	248.20	248.10	247.70	*a*	247.00	246.20	247.20	246.20
16......	246.50	249.90	246.80	248.20	248.20	248.00	247.70	*a*	247.90	246.30	247.60	246.20
17......	246.60	249.20	246.70	248.40	248.20	247.90	247.70	*a*	247.00	246.70	247.80	246.20
18......	246.80	249.90	246.60	248.20	248.30	247.90	247.80	*a*	247.10	246.70	246.20	246.20
19......	246.80	249.00	246.70	248.30	248.30	247.80	247.90	*a*	247.00	246.70	246.00	246.20
20......	246.50	248.90	246.60	248.30	248.30	247.90	247.70	*a*	246.90	246.70	246.40	246.20
21......	246.50	248.80	246.80	248.30	248.10	247.90	247.60	*a*	246.90	246.70	246.20	246.20
22......	246.60	248.70	246.70	248.30	248.00	247.90	247.80	*a*	246.90	246.70	246.00	246.20
23......	246.50	248.50	246.60	248.30	248.10	247.90	247.70	*a*	246.80	246.70	246.20	246.20
24......	246.60	248.20	246.40	248.20	248.10	247.70	247.70	*a*	246.80	246.70	246.20	246.20
25......	246.70	248.00	246.30	248.10	248.00	248.10	247.70	*a*	246.90	246.70	246.20	246.20
26......	246.70	248.00	246.70	248.00	248.00	247.90	247.70	*a*	246.80	246.70	246.10	246.20
27......	246.50	248.10	274.10	248.10	248.00	247.90	247.70	247.00	246.70	246.70	246.20	246.20
28......	246.60	248.10	247.20	248.20	248.10	247.80	247.60	247.20	246.60	246.60	246.00	246.20
29......	246.70	......	247.30	248.40	248.00	247.90	247.50	247.20	246.70	246.60	246.10	246.20
30......	246.70	......	247.90	248.30	247.90	247.90	247.50	245.20	246.50	246.70	246.10	246.20
31......	246.50	......	247.60	......	248.00	......	247.50	246.10	......	247.00	......	246.20

a No record.

OSWEGO TO FULTON

Certain changes of the controlling features of the river have occurred in this section during its canalization for the Barge canal, as follows:

At the curved dam at Oswego the fixed crest has been raised about two feet to Elev. 268.54 and flash boards will maintain the canal pool at Elev. 270.

High dam (old) with fixed crest at about Elev. 281.8 has been submerged by the pool formed by new high dam (dam No. 6) located about a mile downstream with fixed ogee crest 500 feet long at Elev. 290.0, and will be removed.

At Minetto a new curved dam (No. 5) with fixed ogee crest 500 feet long at Elev. 308.0 has been built immediately above the old straight dam, crest Elev. 297.3, which has been removed. This construction work destroyed the control of the Battle Island discharge station, which has been abandoned.

The Battle Island dam, crest Elev. 308.5 and practically submerged by the new Minetto dam, is being removed. There will be one pool from Minetto to Fulton.

The gaging stations at High dam and Battle Island have been abandoned. Gages above and below Minetto have been shifted considerably, as construction progressed.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Curved Dam, Oswego

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	267.53	268.13	267.73	271.13	270.13	267.73	267.23	266.73	267.53	267.23	267.83	267.63
2	267.13	268.13	267.73	271.23	270.13	268.03	267.23	266.73	267.63	268.23	266.93	267.23
3	267.03	268.23	268.03	271.33	270.23	268.03	267.03	265.93	267.63	268.23	267.73	269.23
4	267.33	268.23	268.03	271.43	269.83	267.93	267.23	266.73	267.73	268.33	267.73	269.33
5	267.83	268.53	268.03	271.43	269.33	268.03	266.83	266.63	268.13	265.93	267.13	269.23
6	267.03	268.53	268.03	271.33	269.43	268.03	266.83	266.63	268.03	267.83	267.03	266.93
7	266.93	268.43	268.03	271.23	269.53	268.13	266.93	266.63	267.83	267.73	266.63	265.53
8	266.93	268.23	267.93	271.23	269.43	267.93	266.73	266.43	267.83	267.63	267.13	267.63
9	266.93	268.13	268.33	271.33	269.23	268.03	266.83	266.83	267.83	267.43	265.23	267.63
10	267.03	268.13	268.13	271.33	269.43	268.23	266.83	266.13	267.73	267.73	266.53	267.23
11	266.93	268.13	268.03	271.43	269.13	268.13	267.03	266.33	267.63	267.63	266.93	267.03
12	266.43	268.13	268.03	271.33	269.03	268.03	266.93	266.43	267.63	266.73	265.73	266.73
13	266.93	268.13	268.23	271.13	269.23	268.03	266.53	266.43	267.73	267.53	265.23	267.63
14	267.03	268.13	267.93	271.13	269.23	268.03	266.83	266.33	267.53	267.73	265.93	269.43
15	267.13	268.13	267.63	271.13	269.13	267.93	266.73	266.43	267.23	267.63	265.03	270.73
16	267.03	268.23	267.93	271.13	269.13	267.63	266.83	267.03	267.33	267.83	265.53	270.23
17	267.03	268.23	267.73	271.13	269.73	267.63	266.83	266.43	267.33	268.13	266.53	269.73
18	267.03	267.83	267.73	271.03	269.53	267.53	266.93	266.93	267.33	268.43	266.23	269.23
19	265.73	268.03	268.13	271.13	269.33	267.43	267.23	267.03	267.53	266.53	265.33	268.93
20	266.83	267.73	267.93	271.03	269.23	267.23	266.83	267.03	267.53	267.23	265.33	269.33
21	266.93	267.73	268.03	270.83	269.03	267.43	267.13	267.03	267.13	267.23	267.03	268.43
22	266.93	267.83	268.23	270.73	269.03	267.23	267.13	266.93	267.23	267.13	265.03	268.73
23	266.93	267.53	268.23	270.73	268.93	267.13	266.93	267.03	267.23	267.33	265.03	268.63
24	266.93	267.93	268.13	270.63	268.93	267.13	266.93	266.23	267.23	267.43	265.83	268.43
25	266.93	268.13	268.03	270.53	268.43	267.23	267.03	266.93	267.23	267.73	265.83	268.43
26	266.13	268.23	268.53	270.73	268.53	266.83	267.13	266.93	267.23	266.83	266.53	267.73
27	266.93	268.03	269.63	270.73	268.53	266.93	266.13	267.03	267.23	267.73	265.33	269.53
28	267.13	267.83	270.53	270.23	268.33	266.93	266.83	267.13	266.73	267.83	265.83	268.63
29	267.13	......	270.93	270.33	268.23	266.83	266.83	267.23	266.93	267.53	266.33	269.23
30	267.23	......	270.83	270.23	268.43	267.43	266.63	267.63	266.93	267.33	265.53	268.93
31	267.63	......	270.93	......	268.43	......	266.73	267.33	......	267.43	......	268.93

Daily Elevation of Water-surface (B. C. Datum) of Oswego River below High Dam, near Oswego

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	269.70	274.80	278.36	*a*	272.41	270.31	268.00	268.20	272.00	277.00	......	......
2	269.70	275.00	278.61	*a*	272.71	270.21	269.45	268.30	272.00	276.90	......	......
3	269.90	274.40	278.91	*a*	273.41	270.31	268.20	268.50	271.90	277.00	......	......
4	*a*	274.20	279.41	275.11	272.71	270.41	268.10	268.40	272.20	276.30	......	......
5	270.05	274.30	279.11	275.16	272.21	270.41	269.20	268.40	273.00	276.80	......	......
6	270.10	274.40	279.31	275.31	272.11	270.21	268.70	268.40	272.10	276.20	......	......
7	269.90	275.00	278.41	275.06	272.26	270.51	268.65	268.70	271.80	276.00	......	......
8	269.90	274.05	278.71	275.31	272.11	270.71	268.60	268.70	271.50	276.50	......	......
9	270.00	274.05	278.91	275.21	272.11	270.41	268.55	268.30	271.80	276.60	......	......
10	269.80	274.35	279.06	275.11	271.61	270.31	268.50	268.50	272.00	276.30	......	......
11	*a*	274.40	279.11	275.31	271.91	270.41	269.20	268.60	271.60	275.10	......	......
12	270.00	274.30	279.11	275.06	271.81	269.60	268.50	268.30	271.20	275.90	......	......
13	273.80	274.10	278.71	275.11	272.06	269.70	268.60	268.30	270.70	276.10	......	......
14	274.00	274.20	278.41	275.01	272.01	269.20	269.40	268.40	271.10	277.40	......	......
15	274.15	273.60	276.71	275.06	271.91	269.40	269.25	268.40	270.90	278.20	......	......
16	275.70	273.90	277.21	275.01	271.71	269.20	268.70	266.20	270.70	278.60	......	......
17	275.20	274.00	276.81	274.96	271.81	269.00	269.20	266.20	270.60	279.80	......	......
18	274.90	273.90	276.91	274.81	272.71	268.80	269.60	267.00	270.80	280.95	......	......
19	274.90	273.00	276.81	274.21	272.16	268.70	269.80	268.20	271.00	281.10	......	......
20	275.00	272.90	277.21	274.51	271.96	268.40	270.20	268.35	270.30	281.00	......	......
21	274.70	272.90	277.31	274.41	271.31	268.00	270.10	268.30	270.20	*	......	......
22	273.50	273.40	277.91	274.31	271.11	268.20	269.70	268.30	270.20	......	......	......
23	273.90	273.20	277.81	274.06	271.11	268.00	270.10	267.00	270.20	......	......	......
24	273.90	273.10	278.11	273.71	271.01	268.20	270.05	267.20	270.00	......	......	......
25	274.10	272.70	277.01	273.61	270.81	268.40	270.05	267.60	269.90	......	......	......
26	274.00	272.80	276.91	273.56	270.21	268.20	268.20	268.40	269.85	......	......	......
27	274.05	272.90	277.21	273.46	270.21	268.00	268.10	268.60	269.70	......	......	......
28	274.05	273.00	280.11	273.31	270.51	268.20	268.60	268.45	270.20	......	......	......
29	274.30	......	*a*	273.31	270.81	267.90	269.00	268.80	276.40	......	......	......
30	274.90	......	*a*	273.21	270.71	267.70	268.30	270.30	276.50	......	......	......
31	275.00	......	*a*	......	*a*	......	268.20	270.50	......	......	......	......

a No record. * Gage discontinued, drowned out by backwater from new High dam; difference in pools eliminated.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above High Dam, near Oswego

1914	Jan.	Feb. *a*	Mar. *a*	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	273.00	......	......	*a*	279.97	274.50	272.20	270.40	272.70	278.06	280.77	......
2.....	273.00	......	......	*a*	280.02	274.60	271.40	270.25	272.75	278.16	281.37	......
3.....	272.95	......	......	*a*	278.77	275.10	271.30	270.30	272.90	278.36	282.67	......
4.....	*a*	......	......	*a*	279.07	274.60	271.20	270.25	273.20	276.66	282.97	......
5.....	272.85	......	......	282.77	278.37	274.50	271.10	270.35	273.60	277.46	282.87	......
6.....	272.80	......	......	283.17	278.17	274.55	271.00	270.35	272.60	276.66	282.97	......
7.....	273.00	......	......	282.67	278.27	274.10	270.95	270.50	273.10	277.66	282.57	......
8.....	273.00	......	......	282.87	278.17	274.80	271.00	270.40	273.20	277.56	280.92	......
9.....	272.85	......	......	282.92	277.37	274.70	270.90	270.20	272.90	277.56	282.77	......
10.....	272.95	......	......	283.17	277.17	274.80	270.95	270.40	272.80	277.66	282.57	......
11.....	*a*	......	......	283.22	277.27	274.70	271.20	270.20	272.60	276.96	282.17	......
12.....	272.90	......	......	283.02	277.37	274.60	270.90	270.35	272.50	277.56	281.97	......
13.....	272.80	......	......	283.17	277.29	274.50	271.20	270.40	272.30	278.06	281.72	......
14.....	*a*	......	......	282.82	277.27	274.25	271.10	270.30	272.10	278.76	281.52	......
15.....	*a*	......	......	282.77	277.29	274.40	271.05	270.30	272.86	279.46	279.47	......
16.....	*a*	......	......	282.72	277.22	274.45	270.90	269.40	272.76	279.66	281.42	......
17.....	*a*	......	......	282.67	277.22	274.50	270.90	269.50	272.76	279.86	285.37	......
18.....	*a*	......	......	282.47	277.27	273.60	271.10	270.20	272.71	*a*	284.47	......
19.....	*a*	......	......	282.27	277.57	273.20	271.10	270.40	272.86	*a*	282.37	......
20.....	*a*	......	......	282.17	277.17	272.80	271.60	270.50	272.56	281.37	282.27	......
21.....	*a*	......	......	281.92	276.67	272.50	271.70	270.50	272.96	281.47	282.07	......
22.....	*a*	......	......	281.37	276.52	272.40	271.75	260.60	272.46	281.52	279.77	......
23.....	*a*	......	......	281.57	276.17	272.20	271.80	269.30	272.56	281.67	281.57	......
24.....	*a*	......	......	280.67	275.67	272.40	271.75	269.40	272.46	282.07	282.37	......
25.....	*a*	......	......	280.87	276.07	272.50	271.70	270.50	272.16	281.57	282.67	......
26.....	*a*	......	......	280.77	275.97	272.35	270.60	270.70	272.06	281.07	282.77	......
27.....	*a*	......	......	280.57	275.92	272.20	270.50	270.90	271.86	282.57	282.57	......
28.....	*a*	......	......	280.17	*a*	272.00	271.10	271.30	273.06	282.37	282.27	......
29.....	*a*	......	......	279.67	276.00	272.70	270.70	271.60	278.06	282.17	279.87	......
30.....	*a*	......	......	280.07	276.05	273.20	270.60	271.80	277.16	282.07	281.47	......
31.....	*a*	......	......	......	*a*	......	270.50	272.10	......	281.97	......	......

a No record.
NOTE.— Gage carried away by ice on January 14 and not replaced till April 5. Gage discontinued.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River Below Dam at Minetto

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	291.30	292.50	292.20	295.50	292.00	288.30	287.50	287.00	291.30	290.50	289.10	289.75
2.....	291.30	293.30	292.20	295.70	292.00	288.30	287.60	286.00	291.00	290.30	290.00	289.70
3.....	291.40	293.90	292.20	295.10	291.80	288.50	287.30	287.30	291.00	290.30	290.50	289.60
4.....	291.40	293.90	292.20	295.00	291.40	288.70	287.30	287.20	291.40	289.00	290.90	289.80
5.....	291.50	294.30	292.20	294.20	291.00	289.00	287.20	287.20	291.00	289.30	290.60	289.70
6.....	291.50	294.30	292.20	294.10	291.00	288.90	287.10	287.40	291.30	290.50	290.60	289.50
7.....	291.30	294.00	292.30	293.80	291.00	288.30	287.30	287.30	291.10	290.40	290.70	289.05
8.....	290.90	293.50	292.20	293.80	290.90	289.10	287.30	287.40	291.20	290.60	290.10	288.70
9.....	290.80	292.90	292.30	293.80	290.90	289.00	287.30	285.70	291.10	290.50	291.00	288.50
10.....	290.90	292.50	292.30	293.80	290.50	289.30	287.30	285.80	291.00	290.30	290.90	288.50
11.....	290.80	292.40	293.00	293.80	290.70	289.30	287.30	287.60	291.00	290.10	290.54	288.25
12.....	290.80	292.30	292.30	293.90	290.80	289.30	287.30	287.50	291.00	290.20	290.50	288.20
13.....	290.90	292.20	291.90	293.90	291.00	289.10	287.30	287.50	290.50	290.40	290.50	287.80
14.....	291.00	292.20	292.80	293.50	290.90	288.70	287.30	287.30	291.00	290.40	290.60	288.70
15.....	290.90	292.30	290.30	293.50	290.90	289.00	287.30	287.30	290.90	290.50	290.30	288.75
16.....	290.90	292.20	292.50	293.50	290.90	289.00	287.30	287.30	291.00	290.50	290.35	288.50
17.....	290.90	292.10	291.80	293.60	290.70	288.50	287.30	288.00	290.90	290.40	290.00	288.45
18.....	290.90	291.80	292.00	293.50	290.50	288.30	287.30	289.50	291.00	290.10	289.50	288.20
19.....	290.90	291.50	292.90	293.50	290.50	288.30	286.80	289.50	290.90	290.50	289.20	288.20
20.....	290.70	291.50	292.60	293.50	290.40	288.00	287.30	290.00	290.70	290.50	289.15	287.50
21.....	290.70	291.80	293.00	293.00	290.50	287.30	287.50	290.20	290.80	290.60	289.20	287.90
22.....	290.70	291.90	293.20	292.90	290.40	287.30	287.50	289.90	291.00	290.50	289.10	288.10
23.....	290.60	292.20	293.50	292.70	290.40	287.50	287.30	286.30	290.70	290.60	288.80	288.10
24.....	290.60	292.00	293.00	292.50	290.00	287.50	287.50	286.10	290.50	290.60	289.50	287.90
25.....	290.80	292.10	292.90	292.50	289.60	287.70	287.30	289.90	290.50	288.80	289.40	287.90
26.....	290.90	292.20	293.50	292.00	289.00	287.50	286.60	290.80	290.30	290.80	289.30	288.00
27.....	290.90	292.20	294.90	291.80	289.00	287.30	287.30	290.90	289.50	290.80	289.00	287.45
28.....	290.90	292.20	296.00	292.00	289.00	287.20	287.30	290.50	290.00	290.60	289.20	288.00
29.....	291.00	......	296.10	292.00	288.80	287.70	287.30	290.50	290.30	290.40	289.00	288.45
30.....	291.51	......	296.20	291.80	289.00	288.00	287.20	290.50	290.30	290.35	290.00	288.45
31.....	292.00	......	296.30	......	289.00	......	287.00	291.00	......	290.40	......	288.20

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Dam at Minetto

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	293.26	294.76	294.96	300.36	299.36	295.76	294.66	293.96	304.15	302.15	309.00	309.75
2.....	293.26	295.46	294.86	300.86	299.36	295.66	294.56	292.56	304.05	302.65	309.35	309.70
3.....	293.16	296.06	294.76	301.16	299.16	295.46	293.76	294.56	304.40	302.35	309.50	309.60
4.....	293.16	296.26	294.76	301.36	299.06	295.56	293.56	294.26	305.19	296.70	309.55	309.68
5.....	293.26	296.46	294.76	301.16	298.56	295.66	293.46	294.06	304.58	303.10	309.50	309.70
6.....	293.36	296.46	294.76	301.36	298.46	295.66	293.46	294.96	303.83	309.35	309.50	309.70
7.....	293.36	296.26	294.76	301.16	298.36	295.46	294.06	294.96	303.66	309.30	309.50	309.74
8.....	293.16	296.06	294.66	301.16	298.06	296.06	293.86	294.96	304.72	309.50	309.40	309.61
9.....	292.96	295.56	294.56	301.36	297.96	296.16	293.96	292.66	304.41	309.40	309.60	309.55
10.....	293.16	294.96	294.66	301.36	297.36	296.06	293.76	293.26	304.05	309.30	309.50	309.55
11.....	293.06	294.86	296.86	301.36	296.96	295.96	293.86	295.36	303.88	309.10	309.54	309.43
12.....	293.16	294.96	294.56	301.36	297.86	295.96	293.26	295.26	303.66	309.10	309.50	309.44
13.....	293.46	294.96	295.26	301.36	297.86	295.86	293.86	295.06	302.57	309.40	309.48	309.10
14.....	293.56	294.96	299.06	301.26	297.96	294.76	293.86	294.86	303.25	309.40	309.50	309.73
15.....	293.46	295.86	299.56	301.06	297.56	295.06	293.76	294.86	303.05	309.40	309.45	309.72
16.....	293.46	296.36	294.56	301.06	297.86	294.96	293.76	293.76	302.96	309.30	309.55	309.50
17.....	293.56	295.96	293.96	300.96	297.96	294.86	293.86	293.66	302.91	309.40	309.78	309.50
18.....	293.66	295.46	294.36	300.86	298.46	294.66	293.66	295.96	302.87	309.20	309.61	309.44
19.....	293.66	294.86	295.16	300.56	298.26	294.46	292.96	295.56	303.07	309.50	309.50	309.40
20.....	292.76	294.76	294.56	300.86	297.96	293.86	293.36	295.36	301.47	309.40	309.45	309.32
21.....	292.66	295.46	295.16	300.46	297.86	293.16	293.46	295.56	302.27	309.50	309.50	309.45
22.....	292.56	295.76	294.96	300.36	297.66	293.56	293.56	295.16	302.79	309.40	309.42	309.48
23.....	292.46	296.36	295.06	300.16	297.56	293.36	294.86	292.56	302.55	309.50	309.38	309.48
24.....	292.46	296.16	295.16	300.06	296.26	293.86	294.56	292.56	302.26	309.50	309.68	309.50
25.....	292.66	295.16	294.76	299.96	295.66	294.36	294.56	295.56	302.04	308.90	309.58	309.37
26.....	292.76	294.56	295.46	299.36	295.56	294.46	293.06	295.56	301.67	309.50	309.50	309.42
27.....	292.66	294.66	297.26	299.66	295.46	294.66	293.76	300.56	301.55	309.50	309.44	309.15
28.....	292.66	294.86	299.26	299.46	295.46	293.06	294.66	301.06	301.73	309.50	309.50	309.45
29.....	292.86	......	299.86	299.36	295.26	293.66	294.56	301.56	301.67	309.40	309.50	309.50
30.....	293.56	......	300.06	299.56	295.46	294.06	294.26	301.76	301.63	309.35	309.70	309.50
31.....	294.26	......	300.46	......	295.66	......	293.96	303.16	......	309.40	......	309.40

Daily Elevation of Water-surface (B. C. Datum) of Oswego River opposite Battle Island, near Fulton

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	301.13	*a*	*a*	309.23	307.63	302.93	301.73	300.18	304.65	*b*	......	......
2.....	300.73	303.33	*a*	309.78	307.63	303.38	301.63	298.78	305.57	......	......	......
3.....	300.83	303.53	302.33	310.11	306.93	303.28	301.08	297.53	304.98	......	......	......
4.....	300.13	303.83	302.08	310.28	307.23	303.23	300.03	299.43	305.58	......	......	......
5.....	300.83	304.03	302.28	310.03	306.28	303.43	300.78	298.83	305.51	......	......	......
6.....	300.93	303.98	301.88	310.08	306.53	303.13	301.13	298.78	304.81	......	......	......
7.....	300.93	303.68	301.98	309.83	306.63	302.53	301.13	298.78	304.42	......	......	......
8.....	300.83	*a*	*a*	309.98	306.43	303.03	300.83	298.93	305.13	......	......	......
9.....	300.78	302.83	*a*	310.31	306.13	303.53	300.93	297.93	304.98	......	......	......
10.....	300.83	302.53	301.98	310.28	305.63	303.83	300.93	297.18	304.63	......	......	......
11.....	*a*	302.43	302.03	310.23	305.93	303.63	300.93	299.08	304.33	......	......	......
12.....	301.03	*a*	301.98	309.93	305.53	303.43	299.88	299.01	304.43	......	......	......
13.....	301.03	302.38	302.08	310.08	305.93	303.23	300.78	298.90	303.83	......	......	......
14.....	300.83	302.23	302.33	309.91	306.03	302.43	300.93	298.90	303.38	......	......	......
15.....	300.98	*a*	*a*	309.83	305.73	303.13	300.83	298.83	303.94	......	......	......
16.....	300.63	302.68	302.83	309.83	305.83	302.43	300.83	298.23	303.83	......	......	......
17.....	301.03	302.43	301.88	309.78	306.03	302.33	301.03	297.43	303.78	......	......	......
18.....	*a*	302.03	302.28	309.73	306.73	302.28	300.98	299.18	303.69	......	......	......
19.....	300.98	302.08	303.08	309.13	306.03	302.03	300.13	299.23	303.93	......	......	......
20.....	300.58	301.88	302.63	309.53	305.93	301.53	301.23	299.18	303.07	......	......	......
21.....	300.58	302.33	303.43	309.08	305.53	300.63	301.73	299.53	302.93	......	......	......
22.....	300.83	*a*	*a*	309.03	305.43	302.23	301.43	299.57	303.58	......	......	......
23.....	300.28	*a*	302.98	308.83	305.13	301.23	301.13	298.53	303.38	......	......	......
24.....	300.18	302.68	303.28	308.53	304.53	301.23	301.18	297.53	303.12	......	......	......
25.....	*a*	301.93	303.03	308.33	304.43	301.83	300.98	299.73	302.78	......	......	......
26.....	300.63	302.48	303.83	307.83	304.38	301.03	300.03	299.68	302.49	......	......	......
27.....	300.43	302.03	306.93	308.73	304.38	301.13	299.98	302.30	301.16	......	......	......
28.....	300.73	302.03	308.03	307.93	304.08	300.13	301.03	302.82	301.63	......	......	......
29.....	301.03	......	308.68	308.23	303.63	301.33	300.83	303.21	302.82	......	......	......
30.....	301.68	......	308.78	308.03	303.33	302.23	300.53	303.62	302.47	......	......	......
31.....	*a*	......	309.03	......	302.23	......	300.53	303.82	......	......	......	......

[a] No record. This station is about 1,600 feet below Battle Island dam.
[b] Gage discontinued.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Battle Island Dam, near Fulton

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	309.91	*a*	*a*	......	......	......	......	......	......	......	......	......
2.....	309.81	310.60	*a*	......	......	......	......	......	......	......	......	......
3.....	309.80	310.64	310.22	......	......	......	......	......	......	......	......	......
4.....	309.58	310.86	310.19	......	......	......	......	......	......	......	......	......
5.....	309.68	310.91	310.19	......	......	......	......	......	......	......	......	......
6.....	309.72	310.83	310.13	......	......	......	......	......	......	......	......	......
7.....	309.68	310.75	310.17	......	......	......	......	......	......	......	......	......
8.....	309.68	*a*	*a*	......	......	......	......	......	......	......	......	......
9.....	309.68	310.32	*a*	......	......	......	......	......	......	......	......	......
10.....	309.64	310.18	310.15	......	......	......	......	......	......	......	......	......
11.....	309.30	310.22	310.12	......	......	......	......	......	......	......	......	......
12.....	309.62	*a*	310.09	......	......	......	......	......	......	......	......	......
13.....	309.60	310.18	310.12	......	......	......	......	......	......	......	......	......
14.....	309.55	310.14	310.12	......	......	......	......	......	......	......	......	......
15.....	309.56	*a*	*a*	......	......	......	......	......	......	......	......	......
16.....	309.55	310.32	310.54	......	......	......	......	......	......	......	......	......
17.....	309.58	310.18	310.15	......	......	......	......	......	......	......	......	......
18.....	309.26	310.06	310.30	......	......	......	......	......	......	......	......	......
19.....	309.66	310.08	310.60	......	......	......	......	......	......	......	......	......
20.....	309.67	309.95	310.41	......	......	......	......	......	......	......	......	......
21.....	309.67	309.94	310.52	......	......	......	......	......	......	......	......	......
22.....	309.66	*a*	*a*	......	......	......	......	......	......	......	......	......
23.....	309.59	*a*	310.59	......	......	......	......	......	......	......	......	......
24.....	309.55	310.13	310.73	......	......	......	......	......	......	......	......	......
25.....	309.21	310.12	310.60	......	......	......	......	......	......	......	......	......
26.....	309.48	310.13	310.91	......	......	......	......	......	......	......	......	......
27.....	309.50	310.15	312.18	......	......	......	......	......	......	......	......	......
28.....	309.64	310.14	312.59	......	......	......	......	......	......	......	......	......
29.....	309.76	......	312.86	......	......	......	......	......	......	......	......	......
30.....	309.94	......	312.89	......	......	......	......	......	......	......	......	......
31.....	*a*	......	313.04	......	......	......	......	......	......	......	......	......

a No record. Gage discontinued April 1.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Battle Island Dam, West Side, near Fulton

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	309.89	*a*	*a*	313.13	312.49	310.82	310.46	310.10	310.66	310.24	......	......
2.....	309.79	310.59	*a*	313.38	312.49	310.87	310.37	308.71	310.64	310.28	......	......
3.....	309.79	310.64	310.21	313.55	312.16	310.88	310.17	309.08	310.72	310.34	......	......
4.....	309.56	310.84	310.17	313.62	312.28	310.85	309.77	*a*	310.83	310.33	......	......
5.....	309.68	310.88	310.17	313.48	311.93	310.89	310.14	309.54	310.72	310.11	......	......
6.....	309.72	310.81	310.11	313.53	311.98	310.84	310.29	309.61	310.41	310.11	......	......
7.....	309.67	310.72	310.15	313.42	312.05	310.51	310.30	309.56	310.64	310.11	......	......
8.....	309.67	*a*	*a*	313.48	311.97	310.91	310.22	309.66	310.65	309.66	......	......
9.....	309.67	310.30	*a*	313.64	311.82	310.96	310.23	308.96	310.58	309.46	......	......
10.....	309.64	310.16	310.13	313.62	311.61	311.10	310.43	308.46	310.48	309.41	......	......
11.....	309.30	310.20	310.10	313.61	311.76	311.03	310.44	309.56	310.41	309.01	......	......
12.....	309.62	*a*	310.08	313.44	311.63	310.94	309.91	309.55	310.72	309.11	......	......
13.....	309.60	310.17	310.10	313.52	311.76	310.86	310.19	309.51	310.42	309.16	......	......
14.....	309.55	310.12	310.11	313.44	311.80	310.46	310.35	309.48	310.64	309.46	......	......
15.....	309.56	*a*	*a*	313.38	311.67	310.89	314.26	309.47	310.61	309.51	......	......
16.....	309.54	310.30	310.45	313.38	311.73	310.56	310.38	308.96	310.61	309.56	......	......
17.....	309.56	310.17	310.13	313.36	311.81	310.46	310.42	308.29	310.59	309.66	......	......
18.....	309.24	310.04	310.28	313.35	312.16	310.43	310.41	309.57	310.58	309.46	......	......
19.....	309.65	310.07	310.56	313.09	311.86	310.35	310.00	309.62	310.65	309.56	......	......
20.....	309.67	309.93	310.38	313.27	311.79	310.21	310.57	309.64	310.27	309.51	......	......
21.....	309.67	309.92	310.50	313.08	311.62	309.80	310.63	309.69	310.57	309.51	......	......
22.....	309.66	*a*	*a*	313.03	311.58	310.54	310.45	309.28	310.58	309.51	......	......
23.....	309.59	*a*	310.57	312.96	311.44	310.12	310.34	308.96	310.55	309.56	......	......
24.....	309.55	310.12	310.69	312.84	311.16	310.16	310.35	308.44	310.47	309.46	......	......
25.....	309.21	310.10	310.59	312.78	311.25	310.47	310.39	309.77	310.43	309.01	......	......
26.....	309.48	310.11	310.91	312.53	311.14	310.15	309.86	309.93	310.36	*	......	......
27.....	309.50	310.13	312.12	312.94	311.14	310.20	310.11	310.04	309.81	......	......	......
28.....	309.64	310.13	312.57	312.58	311.04	309.75	310.34	310.16	310.39	......	......	......
29.....	309.76	......	312.83	312.74	310.91	310.35	310.27	310.25	310.42	......	......	......
30.....	309.94	......	312.87	312.62	310.81	310.65	310.29	310.05	310.25	......	......	......
31.....	*a*	......	313.03	......	310.41	......	310.25	310.58	......	......	......	......

a No record. * Gage discontinued October 26.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River at Mouth of Waterhouse Creek, Fulton

1914	Jan	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	309.57	309.77	309.82	313.87	313.22	310.67	310.32	309.92	310.62	310.12	308.97	309.77
2	309.87	310.87	310.37	314.47	313.07	310.67	310.37	308.77	310.62	310.12	309.27	309.67
3	309.87	310.87	310.17	314.47	312.72	310.92	310.17	308.77	310.77	310.32	309.52	309.87
4	309.77	310.87	310.12	314.72	312.77	310.97	309.57	309.42	310.87	308.87	309.37	309.87
5	309.87	311.02	310.32	314.52	312.22	310.97	310.07	309.42	310.72	309.42	309.32	309.77
6	309.67	310.87	309.92	314.67	312.07	310.97	310.07	309.37	310.22	310.12	309.32	309.07
7	309.67	310.87	310.47	314.37	312.32	310.67	310.37	309.22	310.12	310.02	309.37	309.67
8	309.67	310.37	309.57	314.37	312.37	310.72	310.22	308.52	310.72	309.57	308.57	309.67
9	309.67	310.67	310.37	314.77	312.17	310.97	310.17	308.77	310.67	309.27	309.27	309.57
10	309.67	310.17	310.27	314.67	311.79	311.02	310.47	310.87	310.32	309.17	309.67	309.52
11	309.79	310.47	310.27	314.57	311.77	311.17	310.42	309.32	310.37	308.97	309.67	309.47
12	309.77	310.57	310.17	314.57	311.59	310.97	309.97	309.42	310.47	309.02	309.32	309.42
13	309.77	310.47	310.07	314.62	312.17	310.97	310.27	309.32	310.17	309.27	309.07	308.87
14	309.67	310.47	310.27	314.27	311.97	310.42	310.37	309.37	310.52	309.52	309.37	309.67
15	309.97	310.17	310.02	314.27	311.97	310.67	310.27	309.47	310.52	309.52	308.67	309.72
16	309.97	310.47	310.67	314.27	312.12	310.67	310.37	308.77	310.67	309.37	309.47	309.57
17	309.07	310.37	310.22	314.22	311.77	310.57	310.27	307.72	310.57	309.37	309.77	309.57
18	309.07	310.12	310.27	314.27	312.22	310.52	310.27	309.27	310.42	309.32	309.47	309.47
19	309.77	310.17	310.47	313.87	312.22	310.37	309.67	309.42	310.57	309.02	309.32	309.42
20	309.67	310.17	310.47	314.07	311.72	310.17	310.17	309.67	309.97	309.52	309.37	309.12
21	309.67	309.87	310.57	313.87	311.62	309.67	310.57	309.32	310.37	309.42	309.37	309.32
22	309.67	309.17	310.37	313.82	311.82	310.37	310.42	309.27	310.47	309.42	308.97	309.52
23	309.77	310.02	310.17	313.72	311.42	310.27	310.37	308.87	310.47	309.42	308.97	309.47
24	309.67	309.92	310.87	313.47	310.87	310.17	310.32	308.17	310.47	309.37	309.42	309.47
25	308.67	310.22	310.67	313.42	311.12	310.52	310.37	309.67	310.32	308.97	309.42	309.17
26	309.77	310.07	310.97	312.92	310.97	310.12	309.97	309.72	310.27	309.07	309.32	309.17
27	309.67	310.22	311.97	313.67	311.32	310.12	309.87	309.97	309.72	309.47	309.42	309.17
28	309.77	310.22	313.07	313.12	311.17	309.67	310.32	310.17	310.17	309.32	309.47	309.52
29	309.77	......	313.07	313.42	311.97	310.12	310.12	310.07	310.32	309.27	308.97	309.62
30	309.87	......	313.67	313.32	310.77	310.67	310.17	309.87	310.17	309.37	309.52	309.62
31	309.87	......	313.57	......	310.52	......	310.22	310.47	......	309.27	......	309.52

LOWER FULTON DAM

The water-surface elevations above the lower Fulton dam have been taken at one or the other of two gages, giving practically the same readings, *i. e.* gage No. 54 on west bank about 600 feet above the dam and gage No. 64 on east side of river about 700 feet above dam. Old crest of lower dam at Fulton. Elev. 331.8, has been raised to Elev. 335.0 by Barge canal construction.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Lower Dam, Fulton

1910	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	332.75	334.95	336.17	336.80	335.80	335.32	332.57	333.02	332.02	331.57	332.00	333.57
2.....	333.75	335.45	336.95	336.72	335.99	335.07	332.40	332.87	331.77	332.00	331.05	333.54
3.....	332.55	334.85	337.37	336.77	335.75	335.12	333.60	331.52	331.79	331.82	332.32	333.52
4.....	332.00	334.42	337.47	336.80	335.80	334.90	333.80	331.72	331.22	332.12	331.77	334.20
5.....	332.70	334.57	337.62	336.60	335.77	335.20	333.40	331.52	332.00	331.87	331.62	333.72
6.....	332.65	334.67	337.72	336.55	335.75	335.60	331.92	331.22	331.52	331.02	332.92	333.30
7.....	332.75	334.97	338.17	336.39	335.62	335.44	331.72	331.07	331.32	331.62	332.87	333.22
8.....	332.55	334.25	338.12	336.27	335.80	335.37	331.97	331.92	332.27	331.97	332.57	333.07
9.....	333.55	334.07	338.22	336.22	335.87	335.47	332.07	330.62	332.22	332.47	332.72	332.92
10.....	332.65	334.07	338.27	336.20	335.55	335.35	332.47	331.52	332.07	332.27	332.17	332.72
11.....	333.08	334.02	338.27	336.30	335.55	335.35	332.50	331.57	332.97	331.62	332.80	333.72
12.....	332.85	333.97	338.20	336.15	335.27	335.40	330.95	332.17	332.82	331.87	332.82	332.92
13.....	332.60	334.67	338.22	336.02	335.10	335.12	330.87	332.03	332.05	332.32	334.20	333.32
14.....	332.65	334.27	338.20	335.82	335.07	334.77	330.50	332.20	331.57	331.87	333.85	332.52
15.....	332.45	334.17	337.97	335.75	335.10	334.62	331.40	332.62	331.35	331.82	333.32	332.42
16.....	333.55	334.25	337.87	335.82	335.22	334.72	330.80	331.52	332.10	331.95	333.17	331.22
17.....	332.35	334.05	337.77	335.84	334.82	334.20	331.65	331.34	331.57	332.50	333.12	332.42
18.....	332.85	333.97	337.67	336.00	334.90	333.77	332.17	331.77	331.40	332.14	333.30	333.72
19.....	332.75	334.08	337.52	335.62	334.64	334.72	331.20	331.87	332.42	331.67	333.47	332.82
20.....	332.75	334.69	337.45	335.57	334.74	334.52	331.20	331.22	331.72	332.07	334.50	332.12
21.....	333.30	334.44	337.44	335.42	334.85	333.92	331.22	332.80	331.52	332.22	333.82	331.41
22.....	333.65	334.26	337.32	335.35	335.02	333.80	331.87	332.82	332.02	331.97	333.22	332.02
23.....	335.15	334.35	337.20	335.37	335.28	333.70	330.32	331.17	330.42	331.34	333.27	332.72
24.....	334.60	334.24	337.16	335.55	335.02	333.67	330.32	331.22	331.62	332.37	333.60	332.37
25.....	334.40	334.36	337.07	335.65	335.07	333.47	332.42	331.82	332.52	332.22	333.34	333.67
26.....	334.55	334.24	336.97	335.65	335.19	334.02	331.92	331.77	331.62	331.52	333.52	333.87
27.....	334.85	334.47	337.03	335.34	335.29	334.04	331.97	331.82	331.62	331.67	334.80	333.02
28.....	334.80	335.27	337.10	335.45	335.28	333.17	331.12	331.80	332.29	331.87	334.00	332.52
29.....	334.95	......	336.94	335.58	335.57	333.17	331.52	332.57	332.47	332.07	333.72	332.82
30.....	335.35	......	336.89	335.69	335.50	333.07	331.47	331.19	331.82	332.50	333.57	332.92
31.....	335.25	......	336.83	......	335.30	......	331.02	331.52	......	332.72	......	332.62

NOTE.— Gage No. 54 established December 9, 1909.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Lower Dam, Fulton

1911	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	334.42	335.02	334.57	336.62	336.32	333.62	334.12	333.22	333.92	333.82	333.72	333.72
2.....	333.92	335.02	335.02	337.12	336.22	335.52	334.97	333.27	333.77	334.22	333.92	333.82
3.....	334.47	334.62	334.92	336.72	335.97	333.62	333.97	333.02	333.72	333.92	334.32	335.42
4.....	334.82	334.92	335.07	336.52	335.97	334.72	335.12	334.72	333.72	332.37	334.32	334.52
5.....	334.90	335.22	335.87	336.57	335.97	333.97	334.42	333.92	334.27	333.72	335.52	333.52
6.....	334.62	334.57	335.07	337.47	335.92	333.92	332.82	334.62	333.97	335.02	335.02	333.12
7.....	334.87	333.32	337.52	337.42	336.22	333.82	*a*	333.47	334.17	335.02	334.17	334.12
8.....	335.42	333.72	334.32	337.52	335.62	334.02	332.32	332.72	334.02	335.32	333.62	333.92
9.....	334.92	334.24	334.52	337.62	335.52	333.72	334.52	333.92	334.37	334.47	334.07	334.02
10.....	334.57	334.22	334.42	337.57	335.57	333.82	332.67	334.12	334.37	334.22	334.22	335.72
11.....	334.92	334.27	334.62	337.47	335.47	334.82	330.62	333.72	332.52	333.82	334.07	334.42
12.....	334.72	335.52	336.02	337.32	335.42	334.87	332.97	334.32	333.32	333.72	336.12	334.52
13.....	334.82	334.32	335.42	337.22	335.32	333.67	330.02	334.82	333.32	333.92	335.27	334.72
14.....	334.82	334.22	335.67	337.32	335.62	333.57	330.02	335.27	333.57	334.12	334.82	334.92
15.....	335.72	333.82	335.82	337.22	335.37	333.52	332.12	334.22	333.62	335.32	334.72	335.52
16.....	334.62	333.32	335.72	337.32	334.72	333.57	334.72	334.32	333.62	334.72	335.02	335.92
17.....	334.37	334.02	336.02	337.27	334.72	333.17	334.47	333.97	334.92	334.27	334.42	336.62
18.....	334.67	334.12	335.92	337.12	335.22	334.02	332.52	334.32	334.52	334.97	335.17	336.12
19.....	334.97	335.32	336.22	337.12	334.52	333.52	333.52	334.12	333.92	334.32	336.42	335.72
20.....	334.62	335.12	335.72	337.07	334.50	333.12	333.82	333.92	333.92	334.27	335.72	335.52
21.....	334.72	334.62	335.62	336.92	335.32	334.22	334.12	333.92	334.02	334.22	335.62	335.72
22.....	335.04	334.42	335.52	337.02	334.72	334.32	331.32	334.12	333.92	336.12	336.10	335.62
23.....	334.72	334.42	335.62	337.12	334.32	334.17	335.22	333.82	333.72	335.32	335.84	335.82
24.....	334.22	334.82	335.62	336.87	334.32	334.32	333.62	334.32	334.72	334.27	335.72	336.72
25.....	333.62	335.00	336.62	336.72	333.97	335.22	332.27	334.12	334.52	333.92	335.72	336.82
26.....	334.12	335.65	336.62	336.62	334.17	334.67	331.52	333.92	333.82	334.52	335.52	336.02
27.....	334.37	335.27	336.02	336.42	334.12	333.72	331.42	334.72	333.92	334.47	334.92	335.97
28.....	334.52	334.52	336.32	336.17	334.72	334.52	331.42	334.32	334.22	334.32	334.02	335.92
29.....	335.52	......	336.52	336.32	335.02	334.52	333.52	333.82	334.42	335.62	333.72	335.97
30.....	335.12	......	336.62	336.42	333.22	332.32	325.27	334.22	333.87	335.02	334.32	335.22
31.....	334.42	......	336.82	......	383.72	......	333.72	334.12	......	334.02	......	336.22

a No record. Gage No. 54.
NOTE.— 24-in. flash boards placed on dam, June 20, 1911.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Lower Dam, Fulton

1912	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	335.72	333.02	335.17	338.02	336.76	335.86	332.56	331.79	333.14	333.34	333.89	333.24
2	335.12	333.17	335.32	338.22	336.56	336.76	331.86	331.74	333.14	333.14	334.84	334.44
3	335.37	333.12	336.42	338.32	336.36	336.86	332.11	331.84	331.84	332.74	331.74	334.54
4	335.32	335.22	335.12	338.52	336.06	335.66	333.36	331.94	332.64	331.94	334.64	335.24
5	334.62	333.42	335.12	338.52	337.06	335.36	332.76	332.04	331.94	332.44	333.54	335.04
6	334.12	333.22	334.72	338.72	336.96	336.06	332.46	332.14	332.44	334.44	333.24	335.04
7	336.12	333.22	334.72	339.32	336.36	334.96	333.76	331.84	333.14	332.94	333.14	334.94
8	334.62	332.82	334.62	338.92	337.06	334.86	333.16	331.94	334.34	334.24	333.94	336.44
9	334.92	332.72	334.47	339.12	335.66	335.46	332.86	331.64	332.44	331.74	334.24	335.04
10	334.92	332.92	336.32	338.82	335.76	334.46	332.86	331.64	333.94	332.49	335.94	335.04
11	335.32	335.62	334.62	338.92	335.66	334.36	331.76	333.74	333.14	333.04	335.14	335.04
12	334.72	334.02	334.62	339.12	336.36	334.52	330.66	332.54	333.14	332.84	334.69	334.84
13	334.72	332.92	334.32	338.72	335.56	334.42	332.86	331.74	332.44	334.64	334.44	334.84
14	335.02	333.42	334.72	339.12	335.26	334.02	333.36	331.54	333.04	333.44	334.84	334.14
15	334.42	332.42	334.52	338.62	335.06	334.22	331.96	331.74	333.34	333.14	334.74	335.64
16	334.42	332.72	334.82	338.52	335.06	334.86	331.94	331.59	332.99	332.94	334.76	334.14
17	333.92	332.32	336.42	338.42	335.26	334.16	331.54	331.54	333.14	332.94	334.79	334.04
18	334.32	334.22	336.52	338.32	335.26	333.46	331.74	334.34	333.14	333.14	335.94	334.14
19	334.12	331.42	337.12	338.32	336.36	333.06	331.94	334.14	333.44	334.14	334.64	334.34
20	333.92	332.27	337.82	338.22	335.66	333.06	331.74	333.69	333.14	334.54	334.59	334.34
21	335.82	332.42	337.82	338.62	335.66	332.86	331.74	333.64	332.79	333.04	334.39	334.64
22	333.72	333.72	337.72	338.17	335.86	332.96	332.14	332.69	334.44	332.89	334.34	335.84
23	333.92	333.72	337.52	338.62	335.96	334.16	332.04	333.54	334.14	331.94	334.64	334.34
24	334.12	333.52	337.92	338.12	335.86	333.26	331.74	333.24	333.04	332.54	335.64	334.34
25	333.72	335.72	337.22	338.82	335.66	333.01	331.64	334.04	334.34	333.04	334.14	335.74
26	333.52	334.32	337.12	338.32	336.41	332.36	331.64	333.34	333.94	333.74	333.74	334.34
27	333.52	334.32	336.72	338.12	335.66	332.86	331.94	333.44	334.84	335.49	334.74	334.59
28	336.22	334.92	336.62	338.12	335.46	332.11	332.84	333.74	334.04	334.09	334.64	334.04
29	333.22	335.22	336.72	337.42	335.46	332.51	331.89	333.54	334.74	333.74	334.64	335.54
30	333.72	......	337.32	337.72	335.86	333.56	331.94	333.64	333.64	333.74	333.34	333.94
31	333.22	......	338.12	......	335.76	......	332.04	333.74	......	333.64	......	334.24

NOTE.— Gage No. 54.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Lower Dam, Fulton

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	335.42	335.82	334.22	338.62	335.72	335.97	331.82	331.92	331.14	331.34	334.57	335.42
2	334.42	336.82	336.42	338.52	335.92	335.12	331.52	332.02	331.24	331.44	334.57	335.02
3	334.92	336.52	334.62	338.42	335.42	335.52	331.42	329.82	331.14	331.64	335.52	335.02
4	335.52	336.12	334.42	338.52	336.32	335.62	334.02	331.72	330.94	331.14	334.62	334.92
5	336.32	335.97	334.22	338.32	335.92	335.57	333.52	329.82	330.74	329.74	335.02	334.44
6	335.92	335.42	334.22	338.62	335.47	334.62	334.12	331.82	331.14	329.54	333.82	334.64
7	336.32	335.32	333.82	338.12	335.02	335.02	330.12	331.72	*h*	330.34	334.94	335.04
8	336.52	335.97	333.12	337.92	334.62	335.52	331.32	329.12	330.34	330.34	334.92	334.94
9	336.52	336.22	335.42	337.82	334.62	334.97	331.22	325.82	331.04	330.54	330.12	334.64
10	336.82	335.22	334.82	337.82	334.72	334.52	330.42	329.82	330.94	330.74	335.22	334.39
11	336.52	335.22	334.02	337.82	335.62	334.22	330.62	330.22	330.14	331.14	335.12	334.54
12	337.12	335.17	335.62	337.72	334.82	333.32	331.12	328.42	330.74	328.34	334.52	334.44
13	336.82	334.80	336.22	338.02	334.32	333.52	333.32	329.82	330.74	331.24	335.02	334.64
14	336.82	334.92	336.52	337.97	334.22	333.52	333.02	330.22	329.34	333.74	335.12	335.84
15	337.02	334.82	336.87	337.22	333.82	335.12	331.82	330.82	330.24	334.24	335.02	335.14
16	337.02	336.22	337.52	336.62	333.82	334.32	331.62	330.12	330.34	333.64	334.42	334.44
17	336.72	334.82	336.82	336.82	333.57	333.72	331.72	*a*	330.44	333.64	335.82	334.14
18	337.02	334.82	336.72	337.02	334.92	333.62	331.82	331.44	330.74	333.84	335.17	334.14
19	337.42	334.82	336.72	336.72	334.42	333.32	331.72	331.14	330.34	329.44	334.82	334.54
20	337.32	334.42	336.47	337.02	332.62	332.62	333.37	331.34	330.34	333.94	335.02	334.24
21	337.32	334.52	336.42	336.72	332.92	333.72	332.82	331.69	329.14	333.44	335.22	335.44
22	337.52	334.67	336.32	336.42	333.32	335.72	331.72	331.54	330.34	333.24	335.42	334.84
23	337.72	335.92	336.92	336.72	334.02	335.02	331.92	331.59	330.54	334.64	336.32	334.74
24	337.62	335.02	336.62	336.22	334.52	333.82	331.82	328.74	330.04	334.34	335.92	334.54
25	337.47	335.02	336.62	336.02	334.82	332.52	331.92	330.94	330.14	334.04	335.12	335.84
26	338.22	334.82	336.42	336.02	335.32	332.82	331.72	331.24	330.44	329.04	334.62	335.14
27	337.27	334.82	338.02	336.52	335.42	332.82	332.52	331.49	330.49	335.24	335.12	335.04
28	337.32	334.82	338.32	336.12	336.12	*a*	331.22	331.14	330.14	334.34	334.82	336.04
29	337.12	......	338.62	335.62	336.12	*a*	331.72	330.74	330.34	334.54	334.77	334.14
30	336.92	......	338.82	335.72	336.22	*a*	331.72	331.84	331.14	334.54	336.22	334.54
31	336.62	......	339.02	......	336.02	......	331.72	331.24	......	334.34	......	334.84

a No record. *h* Record doubtful. August 18 to October 9, gage No. 54; rest of year, gage No. 64.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Lower Dam, Fulton

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	335.04	337.24	336.24	338.79	338.29	335.94	335.59	331.94	335.39	333.94	334.74	334.75
2.....	334.44	335.74	336.24	339.14	338.24	336.14	335.34	335.84	335.34	334.34	335.04	334.80
3.....	334.64	336.34	334.94	339.24	338.54	336.04	335.24	335.14	335.44	334.34	334.44	334.55
4.....	336.04	336.14	335.44	339.54	338.14	336.24	335.44	332.44	335.54	334.89	334.24	334.90
5.....	334.64	336.34	334.74	339.94	337.44	336.04	335.99	332.44	335.44	335.14	334.39	334.75
6.....	334.94	336.24	334.64	339.54	337.84	336.14	336.04	332.84	336.14	334.54	334.44	335.85
7.....	335.04	336.14	334.74	339.24	337.79	336.64	335.84	331.94	335.89	334.34	335.44	334.90
8.....	334.74	336.54	335.84	339.24	337.74	336.24	335.69	329.84	335.34	334.39	335.14	334.65
9.....	334.94	335.94	335.24	339.44	337.54	336.24	335.64	334.94	335.24	334.44	335.34	335.05
10.....	334.94	334.99	334.59	339.44	337.94	336.34	335.74	334.74	335.34	334.44	334.14	334.95
11.....	335.74	335.24	334.54	339.54	337.64	336.44	335.69	334.34	335.24	335.44	334.34	334.85
12.....	334.84	334.34	334.94	339.94	337.24	336.24	335.34	334.44	335.34	335.34	334.44	334.75
13.....	335.54	335.54	334.44	339.64	337.34	336.04	335.74	334.54	336.14	334.44	334.39	335.25
14.....	335.54	335.34	334.54	339.34	337.34	336.79	335.84	333.94	336.04	333.14	334.14	335.15
15.....	335.34	336.24	335.74	339.29	337.24	336.84	335.59	334.34	335.99	333.84	335.24	334.50
16.....	335.34	335.39	335.94	339.24	337.44	335.84	335.54	335.04	334.64	334.44	335.29	334.40
17.....	335.74	335.54	334.99	339.24	338.24	335.64	334.64	334.94	335.09	334.49	334.64	334.70
18.....	336.74	335.04	335.34	339.19	338.24	335.54	334.64	334.44	335.04	335.74	334.24	334.20
19.....	335.24	335.09	335.94	339.74	337.54	335.64	335.69	334.44	335.29	335.24	334.54	334.85
20.....	334.84	334.44	335.44	339.34	337.44	335.24	335.84	334.34	336.24	334.59	334.44	335.95
21.....	334.84	334.14	335.74	338.84	337.44	335.84	335.14	334.44	335.84	334.54	334.44	334.60
22.....	334.74	336.24	336.64	338.89	337.24	335.94	335.19	334.24	334.74	334.39	335.14	334.70
23.....	334.64	335.24	336.54	338.79	337.14	335.04	334.89	335.14	334.44	334.39	335.14	334.80
24.....	334.74	334.99	335.84	338.74	337.24	334.94	334.84	334.54	333.59	334.34	334.44	334.65
25.....	334.74	334.94	335.74	338.64	336.99	335.44	334.74	335.14	333.59	335.39	334.14	335.70
26.....	334.74	334.94	336.14	339.04	336.54	335.84	335.24	334.54	332.44	335.39	334.54	334.65
27.....	334.94	334.79	337.34	338.84	336.64	334.64	335.04	334.84	335.44	334.44	334.54	335.70
28.....	334.64	334.74	338.24	338.44	336.54	335.74	334.94	334.84	335.74	334.24	334.44	334.75
29.....	334.74	......	339.44	338.64	336.14	335.54	334.24	335.14	334.69	334.04	334.49	334.65
30.....	335.04	......	338.54	338.74	336.24	335.59	334.14	335.74	334.54	334.44	334.74	334.65
31.....	335.24	......	338.79	......	336.44	......	333.34	336.24	......	334.54	......	334.85

NOTE.— Gage No. 64.

UPPER FULTON DAM

The record heretofore published as " above Oswego Falls Dam, Fulton," which is the upper dam, is that of gage No. 12, located a short distance above the dam on the river side of the upper approach wall to Barge canal lock No. 2. Gagings at gage No. 61 on the other side of the wall, *i. e.* in the approach to the lock, give the water-surface above the dam more correctly than those on the river side of the wall, which are affected to a greater or less extent by the surface curve above the dam. Gage No. 12 has been discontinued, the record of which for 1914 is given below, and in future the water-surface above the upper dam will be gaged in the approach to lock No. 2, where a record has been kept since June 7, 1912, which follows that of gage 12 for 1914.

Barge canal construction has raised the crest from Elev. 347.8 to Elev. 352.8 and replaced part of the crest by six Taintor gates, each of twenty-six feet eight inches clear span.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Oswego Falls, or Upper Dam, Fulton

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	352.50	353.50	351.80	354.15	353.20	353.00	352.90	352.60	354.60	353.60	353.00	......
2	352.40	353.70	352.20	354.50	353.00	352.80	352.80	352.46	354.50	352.60	353.10	......
3	353.00	353.70	351.20	354.80	353.20	352.90	352.50	353.00	354.70	351.50	353.10	......
4	352.60	353.05	350.60	354.95	352.80	353.00	353.10	352.50	354.60	351.10	353.10	......
5	352.30	353.40	350.00	355.40	353.00	353.00	352.90	352.60	354.90	353.90	353.00	......
6	352.90	353.20	350.60	355.00	352.80	352.70	352.80	352.65	354.95	353.00	353.00	......
7	352.80	353.10	350.70	354.60	353.00	353.40	352.80	352.40	355.10	352.55	352.70	......
8	352.70	352.50	351.30	354.70	352.80	353.25	352.80	352.20	354.75	352.50	353.00	......
9	352.80	351.60	351.10	354.60	353.60	353.20	352.80	352.10	354.80	352.40	354.00	......
10	352.30	353.20	350.60	354.95	353.10	353.10	352.90	352.40	354.60	352.00	353.60	......
11	352.50	353.30	350.50	355.00	352.70	353.05	352.90	352.65	354.50	353.50	353.50	......
12	352.60	353.15	351.00	355.10	352.70	353.05	352.90	352.60	354.50	353.50	353.20	......
13	351.00	353.10	351.50	355.00	353.10	353.00	352.80	352.50	354.50	354.00	353.05	......
14	351.50	353.00	350.70	354.70	353.00	352.95	352.60	352.60	354.75	353.90	352.70	......
15	351.10	353.10	351.50	354.60	352.90	352.85	352.70	353.50	354.20	353.50	353.00	......
16	351.10	353.10	351.70	354.70	352.95	352.75	352.65	352.20	354.40	353.50	354.10	......
17	350.50	351.90	350.20	354.60	353.70	352.80	352.75	352.70	354.30	353.20	353.90	......
18	351.30	352.30	351.50	354.60	353.50	352.70	352.90	352.60	354.30	353.15	353.20	......
19	351.00	350.80	353.20	354.95	353.00	352.75	353.10	352.70	354.30	353.70	353.00	......
20	351.10	350.50	350.40	354.50	352.60	353.10	352.90	352.60	354.25	353.65	353.20	......
21	351.00	351.20	351.10	354.20	352.55	353.10	353.10	352.60	354.60	353.30	353.10	......
22	351.00	351.70	352.20	354.20	352.50	352.70	352.70	352.50	354.10	353.40	353.40	......
23	350.90	351.00	351.00	354.00	353.20	352.80	352.70	352.60	354.00	353.00	353.70	......
24	351.50	351.40	351.50	353.80	352.80	353.70	352.70	352.60	353.70	353.00	353.60	......
25	351.50	351.20	350.80	353.70	352.60	353.30	352.60	353.10	353.60	353.00	353.20	......
26	350.90	351.10	352.05	353.90	352.50	352.70	352.50	353.40	353.40	353.70	352.80	......
27	352.10	351.10	352.40	354.00	352.80	352.90	352.80	353.40	353.50	353.30	352.70	......
28	352.10	351.10	353.00	353.40	352.70	353.10	352.80	353.30	354.10	353.10	353.10	......
29	352.50	......	354.00	353.60	352.80	353.40	352.60	353.50	353.50	353.00	353.90	......
30	353.60	......	353.90	353.40	353.00	353.20	352.65	353.90	353.40	353.00	354.20	......
31	352.90	......	354.10	......	352.80	......	352.25	354.10	......	353.00	......	......

Note.— Gage discontinued. This record at gage No. 12, in river; see text above.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Upper Dam, Fulton

1912	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	......	......	348.39	347.69	347.39	354.39	354.09	356.04
2	......	......	......	......	......	......	347.99	347.39	347.49	353.34	353.99	355.94
3	......	......	......	......	......	......	347.99	348.19	346.89	352.99	353.94	356.09
4	......	......	......	......	......	......	348.69	346.89	347.99	352.54	354.04	356.14
5	......	......	......	......	......	......	348.49	348.09	349.99	352.89	353.64	356.09
6	......	......	......	......	......	......	348.29	347.39	349.79	353.69	353.79	356.29
7	......	......	......	......	......	350.09	348.79	347.19	349.69	353.69	353.79	356.29
8	......	......	......	......	......	349.99	348.49	347.49	350.29	353.09	354.09	356.34
9	......	......	......	......	......	350.14	348.09	347.49	348.79	353.24	354.29	356.39
10	......	......	......	......	......	349.64	347.69	347.39	350.29	352.99	354.79	356.49
11	......	......	......	......	......	349.49	347.79	347.69	350.04	352.84	355.09	356.34
12	......	......	......	......	......	349.49	347.89	348.14	349.99	352.84	355.09	356.14
13	......	......	......	......	......	349.39	347.59	347.34	349.59	352.59	355.04	356.14
14	......	......	......	......	......	349.39	348.19	347.19	349.79	352.69	355.14	356.04
15	......	......	......	......	......	349.54	348.19	347.49	349.79	351.99	355.39	355.59
16	......	......	......	......	......	349.59	347.69	347.39	350.29	352.69	355.49	355.84
17	......	......	......	......	......	349.39	347.59	347.39	350.79	352.14	355.59	355.89
18	......	......	......	......	......	349.09	347.49	347.79	351.39	352.84	355.64	355.54
19	......	......	......	......	......	348.69	347.69	347.79	352.79	352.99	355.59	355.64
20	......	......	......	......	......	348.89	347.69	347.19	352.89	352.79	355.64	355.59
21	......	......	......	......	......	348.69	347.69	347.09	352.69	352.99	355.59	355.74
22	......	......	......	......	......	349.79	348.39	347.29	352.69	352.99	355.49	355.89
23	......	......	......	......	......	349.09	347.59	347.59	352.59	351.99	355.49	355.74
24	......	......	......	......	......	348.89	347.19	347.39	352.69	352.89	355.59	355.69
25	......	......	......	......	......	348.69	347.29	347.79	354.49	352.89	355.69	355.64
26	......	......	......	......	......	348.19	346.99	347.79	354.49	353.24	355.99	355.49
27	......	......	......	......	......	348.69	347.59	347.29	354.59	353.59	356.09	355.69
28	......	......	......	......	......	348.19	347.49	347.39	353.69	353.69	356.09	355.49
29	......	......	......	......	......	348.29	347.49	347.49	353.69	353.89	356.19	355.39
30	......	......	......	......	......	348.49	347.19	347.19	354.79	353.84	356.04	355.39
31	......	......	......	......	......	......	347.24	347.19	......	353.99	......	355.19

Note.— Gage No. 61, above lock No. 2; see text above.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Upper Dam, Fulton

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	355.39	357.39	354.59	357.84	353.09	352.89	354.19	352.99	352.69	353.09	353.24	354.34
2.....	354.59	356.89	354.54	357.79	353.09	352.24	354.59	352.99	352.74	352.99	353.19	353.84
3.....	355.49	356.54	351.74	357.74	353.09	352.99	354.79	352.99	352.19	353.19	353.74	353.79
4.....	356.29	356.29	354.44	357.69	353.39	352.79	354.09	352.79	351.34	351.84	353.19	353.54
5.....	356.49	356.09	353.89	357.54	353.49	352.89	354.19	351.49	352.74	351.04	353.89	353.39
6.....	356.74	356.09	354.24	357.49	353.09	352.59	353.59	353.69	352.84	350.69	353.34	353.19
7.....	356.64	355.89	353.19	357.39	353.09	352.69	353.29	352.99	352.29	352.04	352.79	353.49
8.....	357.34	355.09	353.44	356.49	354.49	352.39	353.69	351.49	352.00	352.79	352.59	354.19
9.....	357.69	354.89	353.99	355.64	353.39	352.79	352.59	351.99	352.74	352.79	352.49	353.89
10.....	357.39	355.24	354.34	355.04	353.19	352.94	353.24	352.29	351.44	352.74	353.74	353.89
11.....	357.29	355.39	354.99	355.09	353.24	352.49	352.99	351.69	351.59	352.69	353.49	353.89
12.....	357.59	355.39	355.64	354.89	352.99	352.49	352.89	352.99	351.24	351.69	353.49	354.14
13.....	357.79	354.89	354.74	355.14	353.39	353.39	352.59	352.89	352.34	351.19	352.54	352.99
14.....	357.79	354.79	355.09	355.04	353.04	353.39	353.29	352.84	352.04	352.14	353.49	353.99
15.....	357.59	354.89	354.64	354.49	353.09	353.09	352.84	352.74	351.99	352.79	353.49	353.99
16.....	357.49	354.99	354.44	353.59	353.09	351.79	352.99	352.74	351.39	352.49	353.59	353.69
17.....	357.69	355.84	354.49	353.29	352.69	352.49	352.99	352.69	351.09	352.74	335.19	353.79
18.....	357.94	354.69	354.39	353.09	353.19	352.49	352.69	352.59	350.64	351.64	353.79	353.69
19.....	358.29	354.49	354.19	353.19	353.19	352.89	352.79	352.94	350.84	352.49	353.49	353.64
20.....	358.39	354.59	353.94	353.29	352.89	352.89	352.89	352.79	350.84	352.39	353.79	353.19
21.....	358.39	354.49	353.74	353.39	352.99	352.39	352.69	352.84	350.89	352.39	353.89	353.39
22.....	358.54	354.59	353.59	352.99	353.14	352.99	352.79	352.79	352.79	352.54	353.84	353.79
23.....	358.54	354.59	353.64	352.99	353.39	352.89	352.59	352.99	352.74	352.49	353.94	353.39
24.....	358.59	354.64	353.69	353.09	352.89	352.09	352.89	352.74	353.14	353.04	354.34	353.39
25.....	358.54	354.79	353.69	352.99	353.24	352.39	353.09	352.34	353.19	352.49	354.00	354.09
26.....	358.49	354.69	355.49	353.04	353.39	352.99	352.89	352.79	352.99	352.29	353.99	353.79
27.....	358.29	354.64	355.99	353.49	352.99	352.69	352.39	352.89	352.94	353.79	353.99	353.79
28.....	358.29	354.49	357.29	353.19	353.59	351.59	352.89	352.79	352.94	353.54	353.99	352.79
29.....	357.79	......	357.59	352.99	353.04	352.59	353.04	351.84	352.44	353.39	353.89	352.09
30.....	357.99	......	357.84	353.09	353.19	354.29	352.94	352.79	352.99	353.34	353.99	352.99
31.....	357.69	......	357.99	......	353.44	......	352.99	352.79	......	353.29	......	352.99

NOTE.— Gage No. 61, above lock No. 2; see text above.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Upper Dam, Fulton

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	352.69	353.69	351.89	354.59	353.59	353.24	353.09	352.19	354.79	353.69	353.04	353.97
2.....	352.59	353.49	352.29	354.84	353.39	353.19	352.99	352.04	354.59	352.69	353.59	353.92
3.....	353.19	353.79	351.29	355.19	353.49	353.09	352.74	353.04	354.84	351.59	353.29	353.92
4.....	353.09	353.34	350.79	355.34	353.19	353.24	353.19	352.69	354.59	351.19	353.24	353.97
5.....	352.99	352.89	350.49	355.79	353.39	353.04	352.94	352.84	354.99	353.99	353.14	353.72
6.....	353.09	353.29	350.79	355.59	353.14	353.09	352.89	352.79	354.99	353.14	353.09	353.67
7.....	353.09	353.24	350.89	355.09	353.39	353.49	352.84	352.49	355.14	352.69	352.84	353.92
8.....	353.09	352.79	351.49	355.19	353.29	353.49	352.99	352.19	354.84	352.69	353.09	353.27
9.....	352.99	351.79	351.19	355.49	353.94	353.39	352.93	352.34	354.74	352.49	353.99	353.12
10.....	352.99	353.29	350.69	355.39	353.29	353.29	352.99	352.49	354.69	352.14	353.69	353.17
11.....	352.99	353.29	350.69	355.39	353.09	353.14	352.99	352.79	354.49	353.64	353.69	352.67
12.....	352.99	353.39	351.09	355.59	353.09	353.19	352.99	352.69	354.49	353.59	353.24	352.47
13.....	352.99	353.29	351.59	355.39	353.29	353.29	352.99	352.59	354.54	354.09	353.09	352.77
14.....	*a*	353.09	351.59	355.19	353.39	353.04	352.74	352.74	354.79	354.09	352.74	353.47
15.....	*a*	353.29	351.69	355.19	353.29	352.99	352.84	352.59	354.39	353.59	353.09	352.92
16.....	*a*	353.29	351.89	355.09	353.24	352.99	352.89	352.29	354.49	353.59	354.19	352.12
17.....	*a*	352.09	350.39	355.14	353.99	352.99	352.79	352.59	354.34	353.34	353.99	352.27
18.....	*a*	352.49	351.69	355.04	354.04	352.99	353.09	352.74	354.29	353.14	353.49	352.22
19.....	*a*	351.09	353.29	355.19	353.29	352.99	353.19	352.74	354.29	353.74	353.19	352.27
20.....	*a*	350.89	350.69	355.09	353.09	353.29	352.99	352.59	354.34	353.79	353.29	351.47
21.....	*a*	351.39	351.39	354.49	352.79	353.29	353.29	352.59	354.64	353.69	353.14	351.07
22.....	*a*	351.79	352.29	355.44	353.79	352.79	352.99	352.59	354.34	353.39	353.49	351.57
23.....	*a*	351.29	351.19	354.49	353.49	352.99	352.84	352.69	354.14	353.49	353.79	351.67
24.....	*a*	351.29	351.69	354.19	352.99	353.74	352.49	352.64	353.79	353.09	353.69	352.07
25.....	*a*	351.59	350.89	354.14	352.99	353.49	352.44	353.19	353.84	353.09	353.29	351.87
26.....	*a*	350.89	352.19	354.19	353.14	352.79	352.69	353.44	353.49	353.69	352.94	352.32
27.....	*a*	351.29	352.79	354.49	352.99	353.04	352.99	353.49	353.49	353.39	352.89	352.27
28.....	*a*	351.49	353.29	353.79	352.94	353.19	352.94	353.49	354.14	353.14	353.24	352.62
29.....	*a*	......	354.19	354.09	353.09	353.49	352.74	353.49	353.59	353.09	353.49	352.47
30.....	*a*	......	354.29	353.79	353.19	353.39	352.79	353.94	353.59	353.14	354.14	351.97
31.....	*a*	......	354.49	......	352.99	......	352.39	354.24	......	353.09	......	352.32

a No record. Gage No. 61, above lock No. 2; see text above.

FULTON TO PHOENIX

Daily Elevation of Water-surface (B. C. Datum) of Oswego River at Mouth of Ox Creek, near Fulton

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	352.71	352.21	351.61	355.81	354.71	353.41	353.11	352.11	354.81	353.51	353.11	354.01
2	352.51	352.01	351.51	356.31	354.51	353.31	352.51	352.11	354.71	352.41	353.71	354.11
3	352.41	351.91	351.41	356.71	354.51	353.31	352.61	352.91	354.71	352.31	353.51	354.11
4	352.21	351.91	350.91	356.81	353.81	353.41	353.01	352.71	354.81	352.31	353.41	354.11
5	352.11	351.91	350.71	356.91	354.11	353.11	353.01	352.71	354.91	353.51	353.21	354.01
6	352.11	352.01	350.81	356.61	354.01	353.21	353.11	352.51	355.11	353.21	353.01	354.01
7	352.11	351.91	350.81	356.51	354.11	353.21	352.71	352.31	355.01	352.81	352.81	354.01
8	352.11	352.01	350.81	356.61	354.01	353.41	352.81	352.31	354.91	352.61	353.26	353.51
9	352.11	352.01	350.71	356.91	354.11	353.51	352.81	352.11	354.81	352.51	353.81	353.21
10	351.71	353.31	350.71	356.91	354.01	353.51	352.81	352.71	354.71	352.51	353.61	353.11
11	351.51	353.31	350.71	356.81	353.81	353.31	352.81	352.71	354.61	353.41	353.51	352.71
12	351.51	353.31	351.11	357.01	353.61	353.31	352.81	352.71	354.51	353.61	353.41	352.61
13	351.41	353.31	351.51	356.71	354.01	353.21	352.91	352.71	354.71	354.01	353.21	352.81
14	351.21	353.21	351.31	356.61	353.71	353.21	352.81	352.61	354.81	354.01	352.91	353.21
15	351.11	353.11	351.31	356.41	353.71	353.01	352.71	352.61	354.51	353.81	353.41	352.91
16	350.91	352.91	351.01	356.51	353.61	352.91	352.71	352.21	354.51	353.71	354.31	352.11
17	350.81	352.01	351.01	356.41	354.51	352.91	352.81	352.41	354.51	353.51	353.91	352.01
18	350.71	352.41	352.11	356.31	354.51	352.81	352.91	352.61	354.51	353.11	353.61	351.92
19	350.71	351.01	352.71	356.31	354.01	352.81	353.11	352.71	354.51	353.31	353.51	351.81
20	350.71	350.71	351.21	356.01	353.31	353.21	352.91	352.61	354.41	353.51	353.41	351.51
21	350.91	350.61	351.71	355.91	353.21	353.01	352.91	352.81	354.41	353.51	353.41	351.21
22	350.81	351.41	352.01	355.81	353.31	352.81	352.81	352.71	354.31	353.51	353.51	351.11
23	350.81	351.51	351.31	355.71	353.01	352.71	352.81	352.61	354.21	353.41	353.71	351.01
24	350.71	351.61	351.71	355.11	353.01	353.11	352.71	352.41	353.81	353.21	353.51	351.21
25	350.81	351.51	351.71	355.21	353.01	353.11	352.71	353.21	353.71	353.51	353.21	351.61
26	350.81	351.51	352.31	355.71	353.11	352.91	352.51	353.51	353.61	353.81	353.01	352.01
27	351.01	351.41	353.21	355.21	353.11	352.81	353.01	353.51	353.91	353.51	353.01	352.01
28	350.61	351.31	354.61	355.61	353.11	353.01	352.91	353.51	353.91	353.31	353.11	352.11
29	350.71	......	355.31	355.11	353.21	353.61	352.71	353.71	353.81	353.21	353.51	352.11
30	350.81	......	355.41	354.91	353.11	353.21	352.71	354.01	353.81	353.21	353.91	351.51
31	351.21	......	355.71	......	353.11	......	352.41	354.11	......	353.11	......	351.71

Daily Elevation of Water-surface (B. C. Datum) of Oswego River at Hinmansville Bridge, near Phoenix

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	353.04	354.14	......	......	......	......	......	......	......	......	......	......
2	353.14	354.54	......	......	......	......	......	......	......	......	......	......
3	353.24	354.64	......	......	......	......	......	......	......	......	......	......
4	353.14	354.64	......	......	......	......	......	......	......	......	......	......
5	352.94	354.54	......	......	......	......	......	......	......	......	......	......
6	352.74	354.74	......	......	......	......	......	......	......	......	......	......
7	352.54	354.94	......	......	......	......	......	......	......	......	......	......
8	352.74	354.94	......	......	......	......	......	......	......	......	......	......
9	352.94	355.34	......	......	......	......	......	......	......	......	......	......
10	352.94	355.24	......	......	......	......	......	......	......	......	......	......
11	352.74	355.44	......	......	......	......	......	......	......	......	......	......
12	352.64	355.54	......	......	......	......	......	......	......	......	......	......
13	352.44	355.34	......	......	......	......	......	......	......	......	......	......
14	352.14	355.14	......	......	......	......	......	......	......	......	......	......
15	351.84	355.34	......	......	......	......	......	......	......	......	......	......
16	351.84	355.14	......	......	......	......	......	......	......	......	......	......
17	351.44	354.94	......	......	......	......	......	......	......	......	......	......
18	351.14	354.14	......	......	......	......	......	......	......	......	......	......
19	351.44	353.64	......	......	......	......	......	......	......	......	......	......
20	351.44	353.14	......	......	......	......	......	......	......	......	......	......
21	351.64	353.34	......	......	......	......	......	......	......	......	......	......
22	351.34	353.44	......	......	......	......	......	......	......	......	......	......
23	351.54	353.34	......	......	......	......	......	......	......	......	......	......
24	351.94	353.54	......	......	......	......	......	......	......	......	......	......
25	351.74	353.44	......	......	......	......	......	......	......	......	......	......
26	351.84	......	......	......	......	......	......	......	......	......	......	......
27	351.94	......	......	......	......	......	......	......	......	......	......	......
28	352.54	......	......	......	......	......	......	......	......	......	......	......
29	352.34	......	......	......	......	......	......	......	......	......	......	......
30	353.54	......	......	......	......	......	......	......	......	......	......	......
31	353.64	......	......	......	......	......	......	......	......	......	......	......

NOTE.— Gage discontinued, bridge removed.

PHOENIX DAM

The record of water-surface, "1,600 feet below dam at Phoenix," is that of the "North line gage" and has been taken as follows: November 1, 1910, to February 9, 1914, at junction of canal and river about 1,600 feet below the dam; February 10, 1914, to May 14, 1914, in river at temporary bridge about 800 feet below dam; May 15, 1914 and thereafter in canal at lower end of Barge canal lock No. 1, at which location the surface is practically the same as at the junction of the canal and river.

Records heretofore published as "above dam at Phoenix" are of "East line gage," located on the east side of the river, March 1, 1912, to May 5, 1913, between 200 and 250 feet above east bulkhead, and May 6, 1913, to December 31, 1914, at the shore end of east bulkhead. The 1914 record is given below. As this gage is so situated as to be affected by surface slope, it has been discontinued and hereafter the record of water-surface above the dam will be taken at the upper end of the guide wall to Barge canal lock No. 1 (east bank just south of Lock street highway bridge). Gagings which may be considered the beginning of this new record have been taken since May 18, 1912, at the upper end of lock No. 1 and are given below.

Barge canal construction has replaced the old crest at about Elev. 359.1 with two sections of fixed crest at Elev. 363.0 running diagonally upstream to six Taintor gates, each twenty-eight feet six inches clear span, immediately below the Lock street bridge.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River, 1,600 feet below Dam at Phoenix

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	353.90	355.60	355.00	361.90	360.00	356.20	354.70	353.00	356.10	354.50	353.50	354.90
2.....	353.90	356.50	356.00	362.30	360.30	356.40	354.30	352.30	355.80	353.60	354.60	354.90
3.....	354.00	356.30	355.80	362.70	359.70	356.10	354.40	353.70	356.00	352.90	354.20	355.00
4.....	353.00	356.60	355.40	363.00	359.00	356.20	354.20	353.40	356.40	352.20	354.10	*a*
5.....	353.80	356.80	355.30	362.90	359.00	*a*	354.10	353.40	356.40	354.40	354.00	354.40
6.....	354.00	356.80	355.10	362.70	359.10	356.00	354.60	353.40	356.00	353.80	354.00	354.00
7.....	353.90	356.80	355.30	362.60	359.20	355.70	354.00	353.10	356.30	353.50	353.60	354.70
8.....	353.80	357.30	354.30	362.60	359.10	356.50	354.00	353.10	356.10	353.40	*a*	354.10
9.....	353.60	357.40	355.30	363.00	358.90	356.40	354.00	352.30	356.00	353.30	354.60	354.10
10.....	353.50	357.60	354.90	363.10	358.30	356.60	353.90	353.10	355.90	353.30	354.30	*a*
11.....	353.00	357.60	354.90	363.00	358.30	356.40	353.80	353.40	*a*	353.80	354.20	353.40
12.....	354.00	357.50	354.70	363.10	358.20	356.30	353.40	353.20	355.50	354.30	354.20	353.50
13.....	354.60	357.30	354.90	362.90	358.60	356.00	354.00	353.40	355.30	354.50	354.00	353.20
14.....	353.90	357.40	354.50	362.80	358.20	355.80	353.70	353.30	355.50	354.50	353.70	353.40
15.....	353.60	356.60	354.40	362.60	358.40	*a*	353.70	353.20	355.30	353.20	353.70	353.30
16.....	353.40	357.10	354.50	362.60	358.50	355.30	353.70	352.30	355.30	353.10	357.70	353.40
17.....	353.40	356.60	354.30	362.50	358.40	355.20	353.80	353.30	355.30	353.10	355.70	353.40
18.....	352.10	356.30	354.80	362.40	359.40	355.10	354.00	353.20	355.20	353.50	354.70	353.40
19.....	353.40	355.70	355.80	362.10	358.80	354.60	354.10	353.40	355.30	354.50	354.00	353.40
20.....	353.30	355.70	354.90	362.10	358.50	354.80	354.60	353.10	355.10	354.40	354.10	352.00
21.....	353.20	355.30	355.70	361.90	356.60	354.10	354.50	353.50	355.30	354.30	354.10	352.70
22.....	353.20	354.80	355.50	361.90	356.80	355.00	353.70	353.40	355.20	354.20	353.80	352.70
23.....	353.00	355.40	354.80	361.70	356.30	354.40	353.80	352.40	355.00	354.20	354.60	353.20
24.....	353.10	355.70	355.50	360.90	355.50	355.10	353.90	353.70	354.60	354.10	354.30	353.40
25.....	352.10	355.70	355.30	360.90	355.90	354.60	*a*	354.20	354.50	353.70	354.10	352.50
26.....	353.50	355.50	356.10	360.90	356.20	354.20	352.90	354.40	354.40	354.50	353.70	353.50
27.....	353.50	355.40	358.20	*a*	356.00	354.30	354.00	354.50	354.10	354.20	353.70	352.90
28.....	353.50	355.40	359.90	360.60	*a*	354.00	353.90	354.50	354.70	354.00	354.00	353.70
29.....	353.80	......	360.70	361.00	355.50	355.20	353.60	354.70	354.50	353.60	354.00	353.70
30.....	354.80	......	361.10	360.70	356.00	355.20	353.60	355.00	354.50	354.00	355.70	353.10
31.....	354.40	......	361.60	......	355.30	......	353.30	356.30	......	353.90	......	353.10

NOTE.— To February 9, 1,600 feet below dam; February 10-May 14, 800 feet below dam; May 15-December 31, at lower end of new lock No. 1.
a No record.

*Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Dam at Phoenix**

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	363.70	364.80	364.20	366.80	365.10	363.80	363.50	363.10	364.20	363.70	363.80	363.90
2.....	363.70	364.60	364.10	367.00	364.30	363.70	363.40	363.30	364.20	363.70	363.70	363.90
3.....	363.70	364.80	363.80	367.00	364.20	363.60	363.40	363.30	364.20	363.50	363.70	363.80
4.....	363.90	364.80	363.70	366.90	364.30	363.70	363.70	363.20	364.40	363.70	363.60	363.80
5.....	363.90	364.80	363.50	366.80	364.40	*a*	363.70	363.10	364.40	363.80	363.50	363.80
6.....	363.80	364.80	363.50	366.70	364.30	363.60	363.50	363.10	364.50	363.70	363.40	363.90
7.....	363.70	364.80	363.20	366.70	364.10	364.00	363.50	363.10	364.40	363.70	363.60	363.80
8.....	363.70	364.80	363.60	366.60	364.00	363.80	363.50	362.80	364.30	363.70	*a*	363.60
9.....	363.60	364.10	363.30	366.60	363.90	363.80	363.50	362.90	364.20	363.70	363.70	363.60
10.....	363.60	364.30	363.30	366.60	364.20	363.50	363.60	363.10	364.20	363.70	363.60	*a*
11.....	363.70	364.30	363.30	366.60	363.80	363.50	363.50	363.10	*a*	363.70	363.50	363.60
12.....	363.70	364.20	363.30	366.60	363.90	363.50	363.70	363.10	364.10	363.70	363.40	363.60
13.....	363.60	364.20	363.10	366.60	364.10	363.50	363.60	363.10	364.20	363.60	363.30	363.70
14.....	363.50	364.10	363.00	366.50	364.50	363.70	363.50	363.00	364.20	363.70	363.30	363.70
15.....	363.50	364.20	363.20	366.40	364.60	*a*	363.50	363.00	364.30	363.60	363.80	363.20
16.....	363.40	364.20	362.80	366.40	364.70	363.50	363.50	363.00	364.30	363.60	362.00	363.20
17.....	363.50	364.00	362.90	366.40	364.80	363.50	363.40	363.10	364.20	363.70	363.30	363.20
18.....	363.60	364.00	363.30	366.20	363.40	363.40	363.40	363.10	364.20	363.80	363.40	363.20
19.....	363.50	364.00	363.00	366.00	363.50	363.60	363.90	362.80	364.10	363.70	363.60	363.20
20.....	363.50	364.00	363.10	365.80	363.40	363.50	363.70	362.90	364.20	363.70	363.50	363.50
21.....	363.50	363.90	363.20	365.70	364.40	363.80	363.60	362.90	364.00	363.70	363.60	363.50
22.....	363.40	364.10	363.30	365.60	364.30	363.30	363.60	362.70	363.90	363.60	363.60	363.50
23.....	363.40	364.00	363.40	365.50	363.90	363.70	363.40	362.90	363.80	363.80	363.40	363.40
24.....	363.30	364.00	363.10	365.60	364.20	363.60	363.60	363.30	363.80	363.80	363.70	363.30
25.....	363.50	364.00	363.30	365.60	364.00	363.40	*a*	363.50	363.70	363.80	363.50	363.60
26.....	363.50	364.00	363.60	365.50	364.00	363.50	363.50	363.50	363.70	363.60	363.50	363.50
27.....	363.50	364.00	364.70	*a*	364.00	363.50	363.50	363.60	363.80	363.50	363.50	363.60
28.....	363.50	364.00	364.90	365.70	*a*	363.80	363.30	363.80	363.80	363.40	363.60	363.60
29.....	363.70	......	366.10	365.10	364.00	363.80	363.20	364.00	363.80	363.30	363.90	363.40
30.....	363.90	......	366.40	365.00	363.50	363.50	363.20	364.30	363.80	363.20	364.00	363.40
31.....	364.10	......	366.60	......	363.90	......	363.10	364.30	......	364.30	......	363.40

a No record.   * East line gage, at east bulkhead; see text above.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Dam at Phoenix

1912	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	......	364.90	363.40	362.90	363.10	364.00	364.20	364.60
2	......	......	......	......	......	364.50	363.40	362.80	363.20	364.00	364.00	364.50
3	......	......	......	......	......	364.10	363.50	362.80	363.10	364.50	364.10	364.50
4	......	......	......	......	......	363.90	363.50	363.30	363.00	364.00	363.90	364.60
5	......	......	......	......	......	363.60	363.30	363.20	363.00	364.00	*a*	364.70
6	......	......	......	......	......	363.60	363.40	363.10	363.00	364.10	363.90	364.70
7	......	......	......	......	......	363.40	363.60	363.10	363.10	364.10	363.80	364.70
8	......	......	......	......	......	363.30	363.50	363.00	363.30	363.90	364.00	364.90
9	......	......	......	......	......	363.30	363.50	363.00	363.10	363.80	364.20	364.80
10	......	......	......	......	......	363.20	363.30	363.00	363.20	363.80	364.40	364.80
11	......	......	......	......	......	363.10	363.40	363.40	363.00	363.80	364.40	364.70
12	......	......	......	......	......	363.00	363.30	363.20	363.00	363.80	364.30	364.60
13	......	......	......	......	......	362.60	363.30	363.20	363.00	363.80	364.30	364.30
14	......	......	......	......	......	362.90	363.50	363.20	362.90	363.90	364.40	364.30
15	......	......	......	......	......	363.00	363.40	363.00	*a*	363.90	364.40	364.60
16	......	......	......	......	......	363.00	363.10	363.00	363.50	363.80	364.40	364.50
17	......	......	......	......	......	363.10	363.20	362.90	363.50	363.80	364.50	364.40
18	......	......	......	......	363.90	362.80	363.10	363.30	362.90	363.80	364.50	364.30
19	......	......	......	......	364.00	363.00	362.80	363.10	363.40	363.90	364.40	364.40
20	......	......	......	......	363.90	362.90	362.90	363.10	363.40	363.80	364.30	364.50
21	......	......	......	......	364.00	363.00	363.40	363.10	363.40	363.80	364.30	364.50
22	......	......	......	......	364.20	363.20	363.10	363.10	363.60	363.90	364.30	364.60
23	......	......	......	......	364.50	*a*	362.80	363.00	363.50	363.90	364.30	364.50
24	......	......	......	......	364.50	363.60	362.90	362.90	363.50	363.80	364.50	364.50
25	......	......	......	......	364.40	363.20	362.90	363.20	364.00	364.00	364.40	364.60
26	......	......	......	......	364.60	363.10	362.80	363.10	364.00	364.10	364.40	364.40
27	......	......	......	......	364.40	363.20	*a*	363.00	364.10	364.20	364.50	364.30
28	......	......	......	......	364.60	363.30	363.10	363.00	364.20	364.20	364.50	364.50
29	......	......	......	......	365.00	363.20	362.90	362.90	364.30	364.20	364.50	364.40
30	......	......	......	......	365.10	363.50	362.90	362.60	364.10	364.20	364.50	364.40
31	......	......	......	......	365.20	......	362.90	362.60	......	364.20	......	364.40

a No record. Taken above Barge canal lock No. 1.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Dam at Phoenix

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	364.50	366.20	364.10	366.20	363.50	363.50	363.40	362.00	362.70	362.10	363.50	363.90
2	364.60	366.00	364.00	366.10	363.50	363.40	363.50	361.40	362.50	361.90	363.60	363.80
3	364.60	365.80	364.00	366.00	363.50	363.40	363.40	361.50	362.40	361.40	363.60	363.70
4	365.00	365.80	363.70	366.00	363.80	363.40	363.60	361.70	362.70	362.00	363.50	363.70
5	365.40	365.60	363.90	365.80	363.60	363.40	363.60	362.20	362.60	362.40	363.40	363.60
6	365.50	365.20	364.00	365.80	363.40	363.50	363.60	361.70	362.50	362.50	363.50	363.50
7	365.70	364.80	363.70	365.60	363.40	363.40	363.50	361.10	362.40	362.30	363.50	363.90
8	365.80	365.00	364.20	365.40	363.80	363.60	363.30	361.80	362.40	362.40	363.60	363.90
9	365.90	364.90	364.30	365.30	363.70	363.40	363.20	362.10	362.20	362.40	363.50	363.80
10	365.80	365.10	364.20	365.10	363.60	363.40	363.10	362.50	362.00	362.30	363.60	363.80
11	365.90	364.90	364.40	365.10	363.70	363.20	363.10	362.60	362.20	362.30	363.60	363.80
12	366.20	364.90	364.50	365.00	363.40	363.70	363.20	362.80	362.40	362.40	363.60	363.80
13	366.20	364.90	364.80	364.90	363.50	363.90	363.50	362.70	362.00	362.40	363.70	363.90
14	366.20	365.00	364.90	364.70	363.40	363.90	363.30	362.60	361.80	362.50	363.70	364.00
15	366.10	365.00	364.90	364.70	363.60	363.60	363.10	362.70	361.70	362.50	363.80	363.90
16	366.20	365.00	365.00	364.60	363.70	363.60	363.20	362.70	361.70	362.70	363.90	363.90
17	366.20	364.80	364.70	364.30	363.50	363.50	363.10	363.10	362.00	362.80	363.90	363.90
18	366.40	364.80	364.60	364.20	363.60	363.30	363.00	363.20	362.10	362.50	363.80	363.80
19	366.60	364.80	364.50	364.00	363.40	363.40	362.90	363.10	362.20	362.10	363.80	363.70
20	366.70	364.70	364.50	364.00	363.70	363.50	363.20	363.00	362.40	362.40	363.80	363.70
21	366.80	364.60	364.20	363.80	363.80	363.40	363.20	363.00	362.70	362.60	363.90	363.80
22	366.80	364.70	364.10	363.60	363.90	363.50	363.00	362.90	362.90	362.80	363.90	363.70
23	366.90	364.70	364.30	363.40	363.50	363.40	362.90	362.80	362.90	363.00	363.90	363.90
24	366.80	364.60	364.00	363.50	363.20	363.20	362.80	362.90	362.70	363.20	364.00	363.80
25	366.80	364.30	364.10	363.40	363.60	363.40	362.60	362.90	362.60	363.20	363.90	364.00
26	366.80	364.60	364.80	363.40	363.40	363.60	362.50	362.90	362.60	363.50	363.80	363.90
27	366.70	364.50	365.30	363.80	363.60	363.50	362.70	362.80	362.40	363.70	363.90	363.80
28	366.60	364.40	365.70	363.50	363.70	363.30	362.90	362.60	362.70	363.70	363.90	363.90
29	366.50	......	366.00	363.30	363.60	363.50	362.60	362.80	362.50	363.60	*a*	363.90
30	366.40	......	366.10	363.50	363.50	363.40	362.40	362.60	362.10	363.60	364.00	363.80
31	366.30	......	366.20	......	363.40	......	362.20	362.60	......	363.60	......	363.70

a No record. Taken above Barge canal lock No. 1.

Daily Elevation of Water-surface (B. C. Datum) of Oswego River above Dam at Phoenix

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	363.7	364.8	364.3	367.4	365.3	363.9	363.5	363.1	364.2	363.7	363.7	363.9
2......	363.7	364.8	364.3	367.6	364.4	363.8	363.4	363.3	364.1	363.7	363.7	363.9
3......	363.7	364.9	364.3	367.6	364.3	363.7	363.4	363.3	364.2	363.5	363.7	363.8
4......	363.9	365.0	364.2	367.4	364.4	363.8	363.7	363.1	364.4	363.7	363.6	363.8
5......	363.9	365.2	363.6	367.3	364.5	*a*	363.7	363.1	364.4	363.8	363.5	363.8
6......	363.8	365.2	363.6	367.2	364.6	363.6	363.5	363.1	364.5	363.7	363.4	363.8
7......	363.7	365.2	363.6	367.1	364.2	364.0	363.5	363.1	364.4	363.7	363.6	363.8
8......	363.7	364.9	363.6	367.1	364.2	363.9	363.5	363.0	364.3	363.7	*a*	363.6
9......	363.6	364.3	363.6	367.0	364.1	363.9	363.5	362.9	364.2	363.7	363.7	363.6
10......	363.6	364.4	363.6	367.1	364.3	363.6	363.5	363.1	364.2	363.7	363.6	*a*
11......	363.7	364.4	363.6	367.1	364.0	363.5	363.6	363.1	*a*	363.7	363.5	363.6
12......	363.7	364.3	363.5	367.0	364.1	363.6	363.7	363.1	364.1	363.7	363.4	363.6
13......	363.6	364.2	363.2	367.0	364.3	363.6	363.6	363.1	364.2	363.6	363.2	363.7
14......	363.5	364.2	363.1	366.9	364.7	363.7	363.6	363.1	364.2	363.7	363.3	363.7
15......	363.5	364.2	363.2	366.8	364.8	*a*	363.5	363.0	364.3	363.6	363.8	363.2
16......	363.4	364.2	363.0	366.7	364.9	363.6	363.5	363.0	364.3	363.6	362.1	363.2
17......	363.5	364.2	363.0	366.7	364.8	363.6	363.6	363.1	364.2	363.7	363.4	363.2
18......	363.6	364.1	363.4	366.4	363.5	363.5	363.7	363.1	364.2	363.8	363.4	363.2
19......	363.5	364.1	363.1	366.2	363.6	363.6	363.9	362.8	364.2	363.7	363.6	363.2
20......	363.5	364.1	363.2	366.0	363.5	363.5	363.7	362.9	364.2	363.7	363.5	363.5
21......	363.5	364.1	363.3	366.0	364.4	363.8	363.6	363.0	364.0	363.7	363.6	363.5
22......	363.4	364.1	363.4	365.9	364.4	363.4	363.6	362.8	364.0	363.6	363.6	363.5
23......	363.4	364.1	363.6	365.6	364.0	363.7	363.4	362.9	363.9	363.7	363.4	363.4
24......	363.3	364.1	363.1	365.9	364.3	363.6	363.4	363.3	363.8	363.7	363.7	363.3
25......	363.5	364.1	363.4	365.8	364.1	363.5	*a*	363.5	363.7	363.8	363.5	363.6
26......	363.5	364.1	363.7	365.9	364.1	363.6	363.5	363.5	363.7	363.7	363.5	363.5
27......	363.5	364.0	364.8	365.7	364.1	363.5	363.5	363.6	363.8	363.6	363.5	363.6
28......	363.5	364.0	365.6	366.0	*a*	363.8	363.4	363.8	363.8	363.4	363.6	363.6
29......	363.7	......	366.3	365.5	364.0	363.9	363.2	364.0	363.8	363.3	363.9	363.6
30......	363.9	......	366.8	365.3	363.4	363.5	363.1	364.3	363.8	363.2	364.0	363.6
31......	364.1	......	367.1	......	363.9	......	363.2	364.3	......	363.3	......	363.6

a No record. Taken above Barge canal lock No. 1.

OSWEGO RIVER DISCHARGE RECORDS

OSWEGO RIVER AT BATTLE ISLAND

The discharge of the Oswego river at Battle Island was obtained at a current-meter station opposite Battle Island and below the Battle Island dam, having as control the old Minetto dam. The removal of this dam and the construction of the new one forming a pool at a higher elevation gradually destroyed the rating curve previously determined. This station has been abandoned and the discharge will be determined at the Minetto and new High dams.

Discharge for 1914 not yet available; that already published for 1913 subject to revision.

PRECIPITATION RECORD, OSWEGO BASIN

A rain gage is maintained by this Department at South Granby on Ox creek in the Oswego drainage area. Precipitation records have been kept as follows:

Daily Precipitation, in Inches, at South Granby

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1		0.55				0.02						0.13
2			*0.81	0.75					0.64		0.16	0.83
3				0.08				0.11				
4						0.06			0.08			
5				0.07	0.66	0.02						
6		0.05			0.41						0.22	
7			*0.31	0.09	0.14				0.36		0.02	
8	*0.05	0.20		0.67		0.98						*0.24
9				0.34		0.18			0.06		0.27	
10	0.15		*0.35	0.03						0.29	0.02	*0.06
11								0.76		0.18	0.06	
12				0.20							0.09	
13	*0.20				0.91						0.08	
14	*0.22	*0.15			0.09			0.11			0.24	*0.73
15		*0.27					0.01	0.52		0.03	0.06	
16				1.04		0.02				0.12	1.24	
17	*0.34			0.13						0.30		
18							0.84	0.27			*0.05	
19										0.06		
20	*0.10			0.16		0.09					*0.03	*0.13
21	*0.13			0.05				0.77			*0.04	*0.04
22				0.08		0.11	0.08	0.07				
23					0.19						*0.13	*0.02
24							0.91	1.08	0.02			*0.10
25	*0.10				0.02	0.06			0.16			
26				1.11	0.06				0.06			
27			0.75	0.21					0.08	0.17		
28			0.47		0.02	0.04						
29				0.04		1.20		0.71				
30				0.18	0.31	0.04		0.83		0.13		0.46
31	0.10		0.25									
Total	1.39	1.22	2.94	5.23	2.81	2.82	1.84	5.23	1.46	1.28	2.71	2.74
Year												31.67

* Snow.

ONEIDA RIVER BASIN

DESCRIPTION

Oneida lake has a water-surface area of 78 square miles and lies at an elevation of 370 feet above tide. The drainage basin within a radius of ten miles to the south and west is relatively flat, with numerous swampy tracts. The lake receives, through Chittenango and Oneida creeks, drainage from an extensive area of the central New York plateau and, through Wood and Fish creeks on the east, drainage from a portion of the west slope of the plateau bordering the Adirondack mountains. On the north the drainage area is less extensive and the inflowing streams are small.

The outflow from the lake through Oneida river joins Seneca river at Three River Point, forming Oswego river. From Brewerton to Three River Point the distance in a straight line is but eight miles; following the windings of the stream it is sixteen miles.

ONEIDA RIVER

Oneida river is being canalized in connection with the Barge canal work. Two large and two smaller bends will be cut off, the largest cut-off being opposite Caughdenoy. The system of eel weirs formerly located in the river at Caughdenoy has been replaced by a substantial masonry dam and a large sluice-gate has been constructed in the adjacent old canal lock. A lock has also been placed in the cut-off channel, the object of the dam and lock being to maintain the water at a navigable depth in the canal and river above the lock to the foot of Oneida lake at Brewerton. The dam at Oak Orchard has been removed and the low navigable stage of the stream from Three River Point up to lock No. 23, located in the cut-off at Caughdenoy, will be 363.0, or the same as the pool level in Oswego river from Phœnix to Three River Point.

WATER-SURFACE RECORDS, THREE RIVER POINT TO SYLVAN BEACH

The following tables show the daily elevation of water-surface at various gaging stations located on Oneida river and lake during 1914. Certain tables for earlier years are published herewith to supersede previously published records in which errors have been found. Owing to errors discovered in the elevations of the bench-marks from which the zeros of the gages were determined, constant corrections should be applied to elevations previously published for years not republished here, as follows: Oak Orchard both above and below dam, add 0.13 foot previous to 1914; Caughnenoy, add 0.23 foot below dam or lock previous to 1911 and above previous to 1913; Brewerton, add 0.23 foot previous to 1914.

The tables are arranged in order going upstream from Three River Point to Sylvan Beach and show by comparison the fall in the stream between the different gages. Occasionally apparent inconsistencies in the tables of water-surface elevation occur where the water level at an upstream gage is recorded slightly lower than at a point farther downstream, but are, as a rule, not the result of actual mistakes, but arise from the fact that most of the gages are read to the nearest tenth foot only, and also owing to the fact that the streams and lakes are sometimes affected by wind to such an extent as to cause the water-surface to be slightly higher at the downstream end of the level reach than at the upstream end.

Daily Elevation of Water-surface (B. C. Datum) of Oneida River at Three River Point

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	363.90	364.90	364.40	368.90	366.00	364.10	363.70	363.30	364.50	363.90	364.00	364.50
2......	363.90	365.20	364.50	369.00	365.70	364.00	363.70	363.40	364.40	363.90	363.90	364.50
3......	363.90	365.50	364.40	369.10	365.30	364.00	363.60	363.50	364.50	363.90	363.80	364.60
4......	363.80	365.40	364.50	369.00	365.20	364.00	363.70	363.40	364.60	363.80	363.70	364.50
5......	363.80	365.40	364.40	368.90	365.30	363.90	363.80	363.40	364.60	363.70	363.70	364.40
6......	363.80	365.40	364.40	368.70	365.40	363.80	363.60	363.30	364.60	363.80	363.60	364.50
7......	363.90	365.20	264.50	368.50	365.30	364.00	363.50	363.20	364.70	363.70	363.60	364.40
8......	363.90	365.20	364.50	368.30	365.10	364.20	363.60	363.00	364.50	363.90	363.90	364.00
9......	363.80	365.30	364.40	368.50	364.90	364.30	363.60	363.00	364.50	363.80	363.90	363.80
10......	363.80	365.30	364.30	368.50	364.90	364.10	363.50	363.10	364.50	363.80	363.80	363.80
11......	363.70	365.10	364.30	368.40	364.80	363.90	363.70	363.00	364.50	363.80	363.70	363.70
12......	363.80	365.20	364.30	368.30	364.80	363.80	363.80	363.30	364.30	364.00	363.60	363.70
13......	363.70	365.20	364.20	368.20	365.00	363.80	363.70	363.20	364.50	363.60	363.60	363.80
14......	363.70	365.20	364.40	368.00	365.10	364.30	363.70	363.20	364.50	363.80	363.60	363.70
15......	363.60	364.70	364.50	367.80	365.20	363.80	363.60	363.20	364.50	363.80	363.70	363.70
16......	363.60	364.50	364.40	367.80	365.20	363.80	363.60	363.20	364.50	363.70	364.00	363.50
17......	363.60	364.50	364.40	367.80	365.50	363.80	363.50	363.30	364.50	363.70	363.80	363.50
18......	363.70	364.40	364.50	367.60	365.10	363.80	363.60	363.30	364.40	363.90	363.50	363.40
19......	363.70	364.40	364.50	367.40	363.60	363.60	364.00	363.20	364.40	364.00	363.50	363.40
20......	363.60	364.20	364.40	367.20	364.50	363.60	364.00	363.00	364.30	363.90	363.50	363.70
21......	363.60	364.20	364.10	367.00	364.70	363.70	363.80	363.10	364.30	363.70	363.60	363.70
22......	363.60	364.30	364.20	366.90	364.80	363.80	363.70	363.00	364.30	363.70	364.00	363.80
23......	363.50	364.40	363.75	366.70	364.70	363.70	363.60	363.00	364.10	363.60	364.00	363.70
24......	363.50	364.40	363.60	366.50	364.50	363.60	363.50	363.50	364.00	364.00	363.80	363.70
25......	363.50	364.40	363.80	366.40	364.40	363.70	363.50	363.60	364.00	363.90	363.70	363.70
26......	363.50	364.40	364.10	366.70	364.30	363. 60	363.60	363.70	364.00	363.80	363.60	363.60
27......	363.60	364.40	365.80	366.30	364.20	363.50	363.70	363.70	363.90	363.80	363.60	363.70
28......	363.70	364.40	366.30	366.30	364.20	363.70	363.50	363.90	364.00	363.60	363.70	363.70
29......	363.80	......	366.90	366.40	364.00	363.80	363.50	364.00	364.00	363.50	364.00	363.60
30......	363.90	......	367.90	366.20	364.00	363.80	363.40	364.40	363.90	363.40	364.20	363.70
31......	364.00	......	368.50	......	364.20	......	363.40	364.60	......	363.40	......	363.60

NOTE.— December 31, 1913, should read 363.90, not 363.09.

Daily Elevation of Water-surface (B. C. Datum) of Oneida River at Oak Orchard*

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	363.95	365.05	364.35	369.15	366.95	364.25	364.05	363.25	364.35	363.80	363.90	363.85
2.....	364.05	365.30	364.30	369.50	366.55	364.25	364.00	363.25	364.35	363.75	363.85	363.75
3.....	364.05	365.45	364.20	369.65	366.20	364.20	363.95	363.20	364.50	363.80	363.80	363.85
4.....	364.05	365.60	364.15	369.55	366.05	364.25	363.95	363.25	364.65	363.80	363.70	363.95
5.....	364.05	365.40	364.00	369.40	366.25	364.25	364.00	363.25	364.65	363.85	363.55	363.95
6.....	364.05	365.35	363.80	369.25	366.25	364.30	364.05	363.25	364.75	363.75	363.70	363.85
7.....	364.05	365.25	363.75	369.20	366.15	364.45	363.90	363.25	364.85	363.75	363.75	363.75
8.....	364.05	365.05	363.95	369.15	366.00	364.35	363.80	363.30	364.85	363.75	363.85	363.75
9.....	364.15	365.00	363.95	369.25	365.95	364.25	363.75	363.30	365.10	363.75	363.70	363.75
10.....	364.05	364.90	364.00	369.35	365.75	364.25	363.75	363.25	364.80	363.75	363.65	363.75
11.....	363.95	364.85	363.75	369.35	365.65	364.25	363.75	363.25	364.60	363.80	363.60	363.85
12.....	363.95	364.75	363.60	369.20	365.70	364.25	363.80	363.25	364.50	363.80	363.80	363.90
13.....	363.95	364.65	363.45	369.10	365.95	364.25	363.85	363.25	364.35	363.75	363.90	364.05
14.....	363.85	364.65	363.45	369.00	365.95	364.35	363.75	363.25	364.40	363.75	364.10	363.95
15.....	363.85	364.60	363.45	368.85	366.00	364.25	363.75	363.15	364.55	363.75	364.15	364.00
16.....	363.75	364.55	363.10	368.85	365.90	364.25	363.65	363.15	364.45	363.75	364.05	363.90
17.....	363.65	364.45	363.45	368.85	365.70	364.25	363.65	363.15	364.45	363.75	364.10	363.95
18.....	363.65	364.45	363.75	368.70	365.40	364.25	363.65	363.10	364.35	363.75	363.85	364.05
19.....	363.65	364.45	363.65	368.40	365.25	364.15	363.70	363.05	364.40	363.85	363.80	364.05
20.....	363.65	364.45	363.65	368.25	365.35	364.15	363.80	363.15	364.25	363.85	363.75	364.00
21.....	363.65	364.45	363.70	368.15	365.15	364.20	363.60	363.25	364.20	363.85	363.75	364.00
22.....	363.55	364.45	363.85	368.15	365.15	364.10	363.40	363.30	364.10	363.75	363.85	363.90
23.....	363.55	364.45	363.85	368.00	365.10	364.05	363.25	363.35	364.05	363.80	363.85	363.85
24.....	363.55	364.45	363.75	367.85	365.10	364.00	363.25	363.40	363.95	363.85	364.00	363.85
25.....	363.55	364.45	364.00	367.80	364.90	363.85	363.30	363.60	363.65	363.80	364.05	363.85
26.....	363.65	364.40	364.70	367.90	364.85	363.85	363.25	363.65	363.95	363.60	363.95	363.90
27.....	363.65	364.35	366.15	367.70	364.85	363.85	363.25	363.85	363.85	363.50	363.95	364.00
28.....	363.75	364.35	367.15	367.75	364.75	363.90	363.25	363.95	363.85	363.50	363.90	364.05
29.....	363.75	......	367.95	367.50	364.75	363.95	363.25	363.95	363.90	363.75	363.95	364.00
30.....	364.25	......	368.40	367.25	364.70	363.85	363.25	364.10	363.85	363.85	363.95	363.85
31.....	364.65	......	368.75	......	364.85	......	363.25	364.05	......	363.85	......	363.75

*** This record was formerly given as " below dam," since removed. Because of an error in the bench-mark, 0.13 foot should be added to all previously published elevations of water-surface at Oak Orchard both above and below the dam.**

Daily Elevation of Water-surface (B. C. Datum) of Oneida River below Dam at Caughdenoy

1911	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	365.63	366.03	365.43	367.93	368.43	365.53	365.56	365.06	365.06	365.46	365.96	367.56
2.....	365.83	365.93	365.53	368.03	368.33	365.53	365.56	365.06	364.86	365.36	365.86	367.56
3.....	365.73	366.03	365.43	368.03	368.23	*a*	365.56	364.96	364.86	365.36	365.96	367.56
4.....	365.63	366.03	365.53	368.13	368.03	*a*	365.56	364.86	364.96	365.26	365.96	367.56
5.....	366.23	365.93	365.53	368.23	368.03	*a*	365.56	364.86	365.06	365.36	365.86	367.66
6.....	367.23	365.93	365.53	368.33	367.93	*a*	365.46	364.96	365.06	365.56	365.96	367.66
7.....	367.33	365.83	365.53	368.73	367.93	365.86	365.46	364.96	365.16	365.66	366.06	367.56
8.....	367.43	365.93	365.53	369.03	367.83	365.46	365.46	364.96	365.46	365.66	365.96	367.56
9.....	367.63	365.83	365.53	369.63	367.63	365.46	365.36	364.86	365.56	365.76	366.26	367.56
10.....	367.63	365.73	365.63	369.83	367.43	365.46	365.36	364.76	365.46	365.76	366.16	367.66
11.....	366.13	365.73	365.73	369.83	367.23	365.56	365.36	364.66	365.36	365.76	366.16	367.66
12.....	366.13	365.73	365.73	369.73	367.13	365.56	365.26	364.56	365.36	365.66	366.26	367.76
13.....	366.23	365.73	365.93	369.63	367.03	365.46	365.16	364.46	365.46	365.76	366.16	367.96
14.....	366.23	365.73	366.03	369.73	366.73	365.36	365.16	364.36	365.56	365.76	367.16	367.86
15.....	366.23	365.73	366.03	369.73	366.63	365.16	365.16	364.16	365.66	365.66	366.96	367.86
16.....	366.23	365.63	366.53	369.73	366.53	365.26	365.06	364.06	365.66	365.86	367.96	368.26
17.....	366.23	365.63	366.93	369.73	366.53	365.36	365.06	363.96	365.66	365.76	367.06	368.46
18.....	366.23	365.53	366.63	369.83	366.33	365.36	365.06	363.86	365.56	365.76	367.16	368.36
19.....	366.13	365.43	366.33	369.73	366.43	365.26	365.26	363.96	365.46	365.86	367.06	368.56
20.....	366.13	365.43	366.03	369.63	366.33	365.26	365.26	363.96	365.56	365.86	367.26	368.56
21.....	365.93	365.53	366.03	369.63	366.23	365.46	365.26	363.96	365.46	365.96	367.46	368.46
22.....	365.83	365.43	366.03	369.53	366.13	365.56	365.26	363.86	365.46	365.96	367.46	368.16
23.....	365.83	365.43	366.03	369.33	366.03	365.66	365.36	363.86	365.46	365.86	367.56	368.46
24.....	365.93	365.43	366.13	369.23	365.83	365.56	365.36	363.86	365.46	365.76	367.56	368.56
25.....	365.83	365.43	366.23	369.23	365.83	365.56	365.36	363.76	365.56	365.96	367.56	368.66
26.....	365.73	365.43	366.33	369.13	365.73	365.56	365.46	363.86	365.56	365.96	367.56	368.66
27.....	365.83	365.43	366.83	368.93	365.73	365.66	365.46	363.76	365.56	365.96	367.66	369.36
28.....	366.03	365.43	367.23	368.63	365.63	365.36	365.33	364.36	365.46	365.26	367.66	369.56
29.....	366.03	......	367.73	368.53	365.63	365.36	365.36	364.36	365.36	365.96	367.56	369.66
30.....	366.03	......	367.83	368.43	365.63	365.36	365.16	365.06	365.36	365.96	367.66	369.66
31.....	365.83	......	367.83	......	365.83	......	365.16	365.36	......	365.96	......	369.96

***a* No record. Supersedes table published in report of State Engineer and Surveyor for 1911, Vol. II, page 65. Because of an error in the bench-mark 0.23 foot should be added to all published elevations of water-surface at this station for dates previous to 1911.**

Daily Elevation of Water-surface (B. C. Datum) of Oneida River below Dam at Caughdenoy

1912	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	369.76	367.06	366.86	369.86	370.66	368.56	365.76	365.16	366.16	368.66	367.46	368.56
2.....	369.56	366.86	367.81	371.36	370.46	368.36	365.76	365.26	366.26	368.46	367.86	368.66
3.....	368.86	366.56	367.81	371.46	370.26	368.36	365.76	365.36	366.36	368.36	367.76	368.86
4.....	368.76	366.56	366.86	371.46	370.16	368.36	365.66	365.46	366.26	368.26	367.86	369.06
5.....	368.46	366.61	366.86	371.66	369.96	368.16	365.66	365.46	366.26	368.16	367.66	369.26
6.....	368.76	366.56	366.86	371.76	369.66	367.96	365.56	365.56	366.36	368.06	367.56	369.16
7.....	368.76	366.46	366.86	372.06	369.36	367.66	365.56	365.56	366.36	368.06	367.66	369.26
8.....	368.96	366.46	366.86	372.36	369.06	367.56	365.56	365.66	366.36	367.96	367.76	369.16
9.....	368.56	366.51	366.86	372.46	368.66	367.46	365.46	365.76	366.36	367.86	367.86	369.26
10.....	368.46	366.51	366.86	372.66	368.56	367.36	366.26	365.76	366.36	367.66	367.96	369.46
11.....	368.46	366.51	366.86	372.76	368.56	367.26	366.26	365.76	366.46	367.66	367.96	369.46
12.....	368.36	366.51	367.01	372.66	368.56	367.06	366.16	365.86	366.46	367.56	368.06	369.16
13.....	368.26	366.51	367.01	372.56	368.56	366.76	368.06	365.86	366.46	367.46	368.16	369.36
14.....	368.06	366.51	367.06	372.46	368.46	366.86	366.06	365.96	366.46	367.36	368.16	369.26
15.....	367.76	366.51	367.11	372.36	368.46	366.76	366.16	365.96	366.56	367.16	368.16	369.16
16.....	367.76	366.51	367.21	372.36	368.66	366.66	366.06	366.06	366.86	367.36	368.26	369.16
17.....	367.86	366.66	367.66	372.46	368.56	366.66	365.96	366.06	367.06	367.26	368.26	369.06
18.....	368.26	366.66	367.91	372.56	368.36	366.56	365.86	366.16	367.06	367.16	368.26	368.96
19.....	367.86	366.61	368.26	372.66	368.26	366.56	365.86	366.16	367.06	367.06	368.36	368.76
20.....	367.16	366.61	368.31	372.46	368.36	366.46	365.56	366.16	367.16	367.16	368.36	368.76
21.....	367.26	366.66	368.46	372.26	368.56	366.36	365.46	366.26	367.16	367.46	368.26	368.86
22.....	367.31	366.76	368.66	372.16	368.66	366.26	365.56	366.16	367.16	367.36	368.26	369.06
23.....	367.26	366.76	368.86	372.06	368.46	366.26	365.46	366.06	367.26	367.36	368.26	368.96
24.....	367.26	366.66	368.86	371.96	368.66	366.16	365.36	366.06	367.66	367.46	368.36	369.06
25.....	367.06	366.66	368.91	371.86	368.66	366.16	365.26	366.06	368.06	367.66	368.36	369.06
26.....	366.96	366.76	368.66	371.76	368.46	366.06	365.16	365.96	368.66	367.76	368.36	368.96
27.....	366.96	366.76	368.56	371.56	368.36	366.06	365.16	365.96	368.76	367.86	368.26	368.96
28.....	366.86	366.76	368.46	371.26	368.46	365.96	365.16	365.96	368.86	368.06	368.36	368.76
29.....	366.96	366.76	368.76	371.16	368.46	365.96	365.16	366.06	368.86	367.96	368.36	368.76
30.....	367.16	......	368.96	371.06	368.56	365.86	365.16	366.06	368.76	367.86	368.46	368.86
31.....	367.16	......	369.36	......	368.66	......	365.16	366.06	......	367.86	......	368.96

NOTE.— Supersedes table published in report of State Engineer and Surveyor for 1912, Vol. II, page 61.

Daily Elevation of Water-surface (B. C. Datum) of Oneida River below Dam at Caughdenoy

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	369.06	371.26	367.96	371.56	367.96	366.56	363.86	363.80	363.85	363.91	363.76	364.46
2.....	369.16	371.06	367.86	371.36	367.76	366.46	363.86	363.82	363.84	363.93	363.86	364.36
3.....	369.26	371.06	367.96	371.56	367.66	366.36	363.86	363.82	363.83	363.95	363.96	364.26
4.....	368.96	370.86	367.86	371.36	367.66	366.26	363.96	363.82	363.84	363.93	363.76	364.26
5.....	369.16	370.66	367.76	371.16	367.56	366.26	363.86	363.81	363.85	363.93	363.86	364.16
6.....	369.26	370.66	367.66	371.16	367.36	366.16	363.66	363.80	363.86	363.86	363.86	364.16
7.....	339.46	370.76	367.66	371.26	367.26	366.16	363.66	363.81	363.86	363.86	363.86	364.46
8.....	370.06	370.86	367.56	370.76	367.06	366.06	364.66	363.82	363.84	363.93	363.96	364.26
9.....	370.36	370.56	367.66	370.66	366.76	365.96	363.66	363.82	363.83	363.86	363.86	364.56
10.....	370.66	370.36	367.76	370.76	366.56	365.86	363.86	363.81	363.82	363.96	363.76	364.66
11.....	370.86	370.16	367.86	371.06	366.46	365.76	363.86	363.81	363.83	363.96	363.96	364.66
12.....	370.86	369.86	368.06	370.56	366.46	365.76	363.76	363.82	363.81	363.86	363.96	364.56
13.....	370.96	369.46	368.16	370.36	366.36	365.86	364.66	363.82	363.81	363.86	364.16	364.56
14.....	371.06	369.16	368.36	370.26	366.36	365.76	363.86	363.82	363.80	363.76	364.16	364.56
15.....	371.06	368.76	368.56	370.16	366.46	365.66	363.86	363.83	363.79	363.76	364.26	364.46
16.....	370.96	368.66	368.86	369.86	366.36	365.76	363.86	363.83	363.80	363.76	364.26	364.46
17.....	371.26	368.56	369.06	369.76	366.26	365.66	363.86	363.82	363.81	363.75	364.36	364.46
18.....	371.46	368.26	369.36	369.56	366.16	365.26	363.96	363.81	363.82	363.76	364.26	364.36
19.....	371.16	368.16	369.66	369.26	366.06	365.16	363.96	363.80	363.82	363.86	364.36	364.46
20.....	371.26	368.16	369.76	368.96	366.06	365.86	363.96	363.80	363.83	363.86	364.36	364.46
21.....	371.26	368.16	369.86	369.16	366.36	364.36	363.86	363.81	363.83	363.76	364.46	364.46
22.....	371.36	368.26	369.86	369.06	365.96	364.06	363.96	363.80	363.83	363.73	364.46	364.36
23.....	371.46	368.26	369.96	368.96	366.06	363.96	363.96	363.81	363.82	363.68	364.36	364.76
24.....	371.66	368.16	370.06	368.76	365.96	363.86	364.06	363.81	363.82	363.68	364.56	364.36
25.....	371.56	368.16	370.16	367.66	365.96	363.86	364.15	363.82	363.84	363.68	364.46	364.46
26.....	371.46	368.06	370.66	368.56	366.06	363.96	364.16	363.83	363.86	363.66	364.46	364.56
27.....	371.16	367.96	371.56	368.56	366.26	363.96	364.26	363.83	363.88	364.15	364.56	364.96
28.....	371.16	367.96	371.66	368.46	366.56	363.86	364.36	363.84	363.86	364.25	364.76	364.76
29.....	371.26	......	371.96	368.36	366.56	363.96	364.46	363.84	363.88	364.06	364.46	364.66
30.....	371.16	......	372.46	368.16	366.46	363.86	364.56	363.84	363.89	363.96	364.56	364.46
31.....	371.16	......	372.26	......	366.46	......	364.66	363.85	......	363.86	......	364.36

NOTE.— Supersedes table published in report of State Engineer and Surveyor for 1913, Vol. II, page 69.

Daily Elevation of Water-surface (B. C. Datum) of Oneida River below Dam at Caughdenoy

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	364.46	365.36	364.56	370.16	368.26	365.06	364.26	363.46	364.96	364.26	363.86	364.46
2......	364.36	365.46	364.66	370.51	368.16	364.96	364.16	363.56	364.96	364.16	363.96	364.56
3......	364.26	365.56	364.56	370.66	367.96	364.86	364.26	363.56	365.06	364.06	364.06	364.56
4......	364.26	365.76	364.36	370.56	367.56	364.96	364.26	363.46	365.06	363.96	364.06	364.66
5......	364.26	365.76	364.16	370.41	367.66	364.86	364.26	363.56	365.16	364.06	363.96	364.06
6......	364.26	365.76	364.06	370.21	367.56	364.86	364.26	363.56	365.26	363.96	363.96	364.16
7......	364.16	365.66	363.96	370.31	367.36	364.76	364.16	363.46	365.16	363.96	363.96	364.06
8......	364.16	365.66	364.06	370.41	367.36	364.96	364.16	363.46	365.06	363.86	364.06	364.06
9......	364.06	365.86	364.06	370.56	367.26	365.16	364.16	363.36	365.46	363.86	364.16	364.06
10......	363.86	365.46	364.06	370.56	367.26	364.96	364.16	363.36	365.06	363.76	364.06	363.96
11......	364.06	365.16	363.96	370.51	367.06	364.96	364.06	363.46	364.96	363.76	363.96	363.96
12......	364.06	365.16	363.96	370.46	367.06	364.86	364.06	363.36	364.96	363.86	363.96	363.86
13......	364.16	365.06	363.86	370.26	367.16	364.86	364.06	363.36	364.86	363.96	364.06	363.96
14......	364.16	365.06	363.76	370.16	367.06	364.86	364.16	363.36	364.86	364.06	363.96	363.96
15......	364.06	365.06	363.76	369.66	367.16	364.76	364.16	363.26	364.86	363.76	364.76	364.26
16......	364.06	365.06	363.56	369.56	367.06	364.66	364.16	363.26	364.86	363.76	364.36	364.36
17......	363.86	364.86	363.86	369.46	366.86	364.66	364.06	363.36	364.86	363.86	364.16	364.06
18......	363.96	364.76	363.76	369.31	366.56	364.56	364.16	363.36	364.76	363.86	364.26	363.96
19......	364.06	364.76	363.86	369.41	366.36	364.46	364.16	363.26	364.76	363.96	364.26	363.86
20......	363.96	364.56	364.06	369.46	366.26	364.36	364.06	363.46	364.66	363.86	364.16	363.96
21......	363.86	364.56	364.06	369.56	366.16	364.46	363.96	363.56	364.56	363.86	364.16	364.06
22......	363.86	364.56	364.16	369.46	366.96	364.36	363.96	363.46	364.46	363.96	364.06	363.96
23......	363.86	364.66	364.16	369.36	365.86	364.46	363.86	363.56	364.36	364.06	364.16	364.06
24......	363.76	364.56	364.06	369.26	365.76	364.36	363.86	363.76	364.26	364.06	364.16	364.06
25......	363.76	364.66	364.26	369.16	365.56	364.26	363.76	363.86	364.26	364.06	364.06	363.96
26......	363.86	364.66	365.06	369.36	365.46	364.16	363.86	364.06	364.16	364.06	364.06	364.06
27......	363.96	364.56	366.26	369.16	365.36	364.16	363.86	364.16	364.96	363.96	364.16	364.16
28......	363.96	364.56	367.46	369.06	365.26	364.46	363.76	364.26	364.06	363.86	364.16	364.16
29......	364.16	......	368.36	368.86	365.36	364.36	363.66	364.56	364.16	363.76	361.36	363.96
30......	364.36	......	369.26	368.56	364.96	364.16	363.66	364.86	364.16	364.56	364.36	363.96
31......	364.66	......	369.66	......	365.06	......	363.56	364.96	......	*a*	......	363.96

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Oneida River above Dam at Caughdenoy

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	371.06	371.91	371.11	372.61	371.41	370.81	370.36	369.81	369.51	369.66	369.76	370.56
2......	371.16	371.81	371.11	372.81	371.41	370.83	370.31	369.79	369.46	369.59	369.21	370.46
3......	371.21	371.81	371.16	372.91	371.31	370.83	370.31	369.89	369.44	369.41	370.26	370.46
4......	371.01	371.71	371.11	372.81	371.26	370.81	370.36	369.81	369.56	369.56	370.01	370.41
5......	371.21	371.61	371.06	372.61	371.26	370.79	370.31	369.86	369.46	369.61	369.21	370.36
6......	371.31	371.61	371.01	372.71	371.21	370.79	369.91	369.81	369.56	369.63	370.31	370.46
7......	371.51	371.51	371.91	372.61	371.11	370.66	370.01	369.81	369.56	369.69	370.26	370.51
8......	371.61	371.51	370.81	372.61	371.01	370.66	370.21	369.79	369.51	369.66	370.36	370.46
9......	371.81	371.41	370.86	372.61	370.96	370.64	370.26	369.81	369.61	369.56	370.31	370.51
10......	371.81	371.41	370.91	372.71	370.86	370.64	370.66	369.79	369.61	369.61	370.33	370.56
11......	371.91	371.31	370.91	372.81	370.84	370.59	370.16	369.79	369.56	369.51	370.41	370.56
12......	371.81	371.31	371.01	372.51	370.86	370.61	370.16	369.81	369.41	369.66	370.43	370.61
13......	371.91	371.41	371.16	372.41	370.81	370.66	370.26	369.76	369.26	369.51	370.46	370.58
14......	371.91	371.31	371.21	372.31	370.81	370.56	370.01	369.76	369.31	369.51	370.41	370.56
15......	371.81	371.21	371.41	372.21	370.79	370.53	369.99	369.66	369.44	369.61	370.43	370.53
16......	371.71	371.21	371.71	372.11	370.76	370.56	369.99	369.66	369.41	369.56	370.41	370.51
17......	371.91	371.31	371.81	372.11	370.79	370.46	369.99	369.63	369.41	369.61	370.43	370.56
18......	372.01	371.21	372.01	372.01	370.71	370.51	369.96	369.61	369.46	369.56	370.41	370.53
19......	372.11	371.21	371.81	371.71	370.51	370.56	369.96	369.56	369.36	369.56	370.46	370.58
20......	372.21	371.11	371.81	371.81	370.61	370.46	369.99	369.71	369.51	369.66	370.48	370.61
21......	372.21	371.06	371.91	371.71	370.61	370.48	369.99	369.61	369.56	369.58	370.46	370.53
22......	372.31	371.11	372.01	371.81	370.61	370.41	369.96	369.71	369.46	369.96	370.56	370.51
23......	372.41	371.11	371.91	371.71	370.71	370.41	370.01	369.41	369.41	370.06	370.16	370.76
24......	372.31	371.16	372.01	371.71	370.66	370.41	369.96	369.61	369.46	370.11	370.56	370.46
25......	372.21	371.11	372.11	371.61	370.66	370.46	369.96	369.61	369.51	370.11	370.46	370.51
26......	372.11	371.16	372.21	371.61	370.71	370.41	369.99	369.71	369.41	370.16	370.56	370.36
27......	372.01	371.11	372.61	371.56	370.86	370.39	369.93	369.61	369.26	369.26	370.61	370.46
28......	372.21	371.06	372.91	371.51	370.81	370.36	369.86	369.51	369.51	369.26	370.81	370.36
29......	372.31	......	373.21	371.41	370.86	370.43	369.81	369.51	369.41	369.26	370.56	370.36
30......	372.21	......	373.61	371.31	370.81	370.36	369.86	369.61	369.51	369.21	370.61	370.38
31......	372.01	......	373.31	......	370.81	......	369.96	369.56	......	370.11	......	370.38

NOTE.— Supersedes table published in report of State Engineer and Surveyor 1913, Vol. II, page 70. Because of an error in the bench-mark 0.23 foot should be added to all for published elevations of water-surface at this station for dates previous to 1913.

Daily Elevation of Water-surface (B. C. Datum) of Oneida River above Dam at Caughdenoy

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	370.31	370.06	369.91	371.71	371.86	370.86	370.61	370.11	370.61	370.21	369.21	370.91
2......	370.36	370.11	369.89	371.81	371.81	370.86	370.51	370.11	370.51	370.26	369.71	371.01
3......	370.33	370.06	369.81	371.86	371.81	370.81	370.51	370.06	370.61	370.26	368.81	371.01
4......	370.26	370.13	369.83	371.88	371.76	370.81	370.41	370.11	370.51	370.31	369.61	370.91
5......	370.26	370.21	369.86	371.91	371.81	370.76	370.41	370.06	370.66	370.26	369.71	370.91
6......	370.24	370.36	369.81	371.96	371.76	370.76	370.41	370.06	370.71	370.16	369.71	370.86
7......	370.16	370.31	369.81	371.91	371.71	370.71	370.46	370.01	370.51	370.21	369.91	370.71
8......	370.24	370.31	369.83	372.01	371.76	370.81	370.41	369.96	370.61	370.26	369.81	370.61
9......	369.21	370.26	369.81	372.06	371.71	371.01	370.46	369.91	370.61	370.26	369.81	370.51
10......	370.06	370.11	369.81	372.11	371.61	370.86	370.41	369.91	370.56	370.21	369.86	370.51
11......	370.16	370.01	369.79	372.01	371.56	370.91	370.36	370.01	370.71	370.16	369.91	370.36
12......	370.16	370.11	369.76	371.96	371.61	370.86	370.36	369.96	370.61	370.11	369.71	370.31
13......	370.21	370.01	369.61	371.91	371.66	370.86	370.36	369.96	370.56	370.21	369.76	370.31
14......	370.21	370.01	369.63	371.89	371.56	370.81	370.41	369.91	370.51	370.21	369.71	370.21
15......	370.11	370.01	369.71	372.01	371.56	370.71	370.36	369.91	370.61	370.26	370.21	370.31
16......	370.11	370.11	369.76	*a*	371.51	370.66	370.31	369.91	370.51	370.26	369.71	370.51
17......	370.16	370.09	369.76	372.11	371.51	370.71	370.31	369.86	370.46	370.26	369.61	370.41
18......	370.11	370.06	369.83	372.16	371.46	370.76	370.26	369.86	370.41	370.11	370.81	370.61
19......	370.16	370.03	369.81	372.11	371.41	370.71	370.31	369.91	370.41	370.06	371.01	370.51
20......	370.18	370.11	369.93	372.11	371.31	370.66	370.21	370.16	370.36	370.21	371.01	370.31
21......	370.13	370.16	369.96	372.16	371.26	370.71	370.11	370.26	370.36	370.11	370.71	370.36
22......	370.13	370.13	369.93	372.11	371.26	370.66	370.11	370.21	370.41	370.06	370.91	370.31
23......	370.11	370.06	369.94	372.11	371.16	370.61	370.06	370.16	370.31	370.11	370.91	370.31
24......	370.11	370.01	369.96	372.06	371.21	370.56	370.21	370.11	370.21	370.06	370.86	370.41
25......	370.09	369.91	370.01	372.11	371.16	370.56	370.16	370.26	370.26	370.06	370.81	370.31
26......	370.06	369.91	370.01	372.16	371.11	370.51	370.16	370.21	370.21	370.01	370.81	370.31
27......	370.11	369.89	370.41	372.06	371.06	370.51	370.11	370.21	370.11	369.81	370.91	370.31
28......	370.09	369.91	370.86	372.01	371.01	370.71	370.16	370.31	370.16	369.96	371.01	370.36
29......	370.16	......	371.06	371.96	370.96	370.51	370.11	370.36	370.31	370.01	371.11	370.31
30......	370.21	......	371.31	371.91	370.86	370.41	370.16	370.41	370.21	369.86	371.01	370.31
31......	370.41	......	371.51	......	370.91	......	370.11	370.51	......	369.86	......	370.36

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Oneida River at Brewerton

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	370.79	370.79	370.79	373.69	373.39	371.39	370.69	370.29	370.69	370.39	369.89	370.09
2.....	370.79	370.79	370.79	373.89	373.29	371.29	370.69	370.29	370.69	370.39	369.89	370.19
3.....	370.79	370.79	370.69	374.09	373.19	371.29	370.69	370.19	370.69	370.39	369.89	370.29
4.....	370.69	370.89	370.69	374.19	373.09	371.29	370.69	370.19	370.69	370.29	369.89	370.29
5.....	370.69	370.89	370.69	374.09	372.99	371.19	370.69	370.19	370.69	370.29	369.89	370.29
6.....	370.69	370.99	370.69	374.09	372.99	371.19	370.69	370.09	370.79	370.29	369.89	370.39
7.....	370.69	370.99	370.69	373.99	372.89	371.29	370.59	370.09	370.79	370.19	369.79	370.49
8.....	370.69	370.99	370.59	373.89	372.79	371.29	370.59	370.09	370.79	370.19	369.79	370.59
9.....	370.69	371.09	370.59	373.99	372.79	371.29	370.59	370.09	370.89	370.19	369.79	370.59
10.....	370.69	371.09	370.59	374.09	372.69	371.19	370.59	370.09	370.89	370.19	369.69	370.59
11.....	370.59	371.19	370.59	374.19	372.59	371.29	370.59	370.09	370.89	370.19	369.69	370.59
12.....	370.59	371.19	370.59	374.09	372.59	371.29	370.59	370.09	370.79	370.09	369.69	370.49
13... .	370.59	371.09	370.59	373.99	372.59	371.29	370.59	370.09	370.79	370.09	369.69	370.49
14.....	370.59	371.09	370.59	373.99	372.59	371.19	370.59	370.09	370.79	370.09	369.69	370.39
15.....	370.59	370.99	370.59	373.89	372.49	371.19	370.49	370.09	370.79	370.09	369.69	370.39
16.....	370.59	370.99	370.59	373.89	372.49	371.09	370.49	370.09	370.69	370.09	369.69	370.39
17.....	370.59	370.89	370.59	373.89	372.39	371.09	370.49	370.09	370.69	370.09	369.79	370.39
18.....	370.59	370.89	370.59	373.89	372.29	371.09	370.49	370.09	370.69	370.09	369.79	370.39
19.....	370.59	370.89	370.59	373.89	372.19	370.99	370.49	370.09	370.69	370.09	369.79	370.39
20.....	370.59	370.79	370.59	373.89	372.09	370.99	370.49	370.09	370.59	370.09	369.79	370.39
21.....	370.59	370.79	370.69	373.89	371.99	370.99	370.49	370.09	370.59	370.09	369.79	370.39
22.....	370.59	370.79	370.69	373.79	371.99	370.99	370.49	370.09	370.59	370.09	369.89	370.39
23.....	370.59	370.79	370.79	373.79	371.89	370.89	370.49	370.19	370.59	370.09	369.89	370.39
24.....	370.59	370.79	370.79	373.69	371.89	370.89	370.49	370.19	370.49	370.09	369.89	370.39
25.....	370.49	370.79	370.79	373.69	371.79	370.79	370.49	370.29	370.49	370.09	369.89	370.39
26.....	370.49	370.79	370.99	373.69	371.79	370.79	370.49	370.29	370.49	370.09	369.89	370.39
27.....	370.49	370.79	371.29	373.59	371.69	370.69	370.49	370.39	370.49	369.99	369.89	370.39
28.....	370.49	370.79	371.89	373.59	371.59	370.69	370.39	370.39	370.49	369.99	369.99	370.39
29.....	370.49	......	372.29	373.49	371.59	370.69	370.39	370.49	370.39	369.89	369.99	370.39
30.....	370.49	......	372.89	373.49	371.49	370.69	370.39	370.59	370.39	369.89	369.99	370.39
31.....	370.49	......	373.39	......	371.39	......	370.29	370.69	......	369.89	369.99	370.39

NOTE.— This station indicates Oneida lake surface very nearly. Because of an error in the bench-mark, 0.23 foot should be added to previously published water-surface elevations at this station.

Daily Elevation of Water-surface (B. C. Datum) of Oneida Lake at Sylvan Beach

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	370.50	370.10	369.90	375.20	374.40	372.60	371.00	370.80	371.00	370.50	370.00	370.00
2.....	370.50	370.10	369.80	375.30	374.30	372.00	371.00	370.70	371.00	370.50	370.00	370.10
3.....	370.50	370.10	369.80	375.50	374.20	371.80	370.90	370.60	371.00	370.50	370.00	370.20
4.....	370.40	370.20	369.80	375.60	374.00	371.70	370.90	370.60	371.00	370.50	370.00	370.40
5.....	370.40	370.20	369.90	375.60	373.80	371.60	370.90	370.60	370.80	370.50	370.00	370.40
6.....	370.40	370.30	369.90	375.60	373.80	371.40	370.90	370.50	370.80	370.60	370.00	370.40
7.....	370.40	370.10	370.00	375.30	373.70	371.30	370.80	370.40	370.80	370.60	370.00	370.50
8.....	370.40	370.10	370.00	375.50	373.70	371.20	370.80	370.20	370.70	370.60	370.00	370.50
9.....	370.40	370.10	370.10	375.60	373.60	371.10	370.80	370.20	370.70	370.60	370.00	370.50
10.....	370.40	370.10	370.20	375.40	373.50	371.10	370.80	370.20	370.70	370.50	369.90	370.40
11.....	370.30	370.00	370.30	375.30	373.40	371.00	370.80	370.10	370.60	370.50	369.90	370.40
12.....	370.30	370.00	370.40	375.20	373.00	371.00	370.80	370.10	370.60	370.60	370.00	370.40
13.....	370.30	370.00	370.50	375.10	373.00	371.00	370.70	370.10	370.60	370.60	370.00	370.60
14.....	370.30	370.00	370.50	375.10	373.00	371.00	370.70	370.10	370.60	370.60	370.10	370.60
15.....	370.30	370.00	370.50	375.00	373.00	371.00	370.60	370.10	370.60	370.60	370.20	370.50
16.....	370.20	370.00	370.50	375.00	373.00	371.00	370.60	370.00	370.70	370.60	370.20	370.50
17.....	370.20	370.00	370.50	375.20	372.60	371.00	370.50	370.00	370.70	370.60	370.40	370.40
18.....	370.20	370.00	370.60	375.20	372.10	371.00	370.50	370.00	370.70	370.60	370.30	370.30
19.....	370.10	369.90	370.60	375.10	371.80	371.00	370.50	370.50	370.70	370.60	370.20	370.30
20.....	370.10	369.90	370.60	375.40	371.40	371.00	370.50	370.30	370.80	370.60	370.20	370.30
21.....	370.10	369.90	370.60	375.60	372.00	370.90	370.50	370.50	370.80	370.50	370.20	370.30
22.....	370.10	369.90	370.60	375.75	372.10	370.90	370.40	370.00	370.80	370.50	370.10	370.30
23.....	370.10	369.90	370.60	375.60	372.10	370.90	370.60	370.40	370.80	370.50	370.10	370.30
24.....	370.10	369.90	370.60	375.20	371.90	370.80	370.70	370.40	370.80	370.40	370.00	370.30
25.....	370.00	369.90	370.60	375.00	371.80	370.80	370.70	370.50	370.70	370.30	370.00	370.20
26.....	370.00	369.90	370.80	375.00	371.90	370.90	370.70	370.60	370.70	370.30	370.00	370.20
27.....	370.00	369.90	371.10	374.80	372.00	370.90	370.80	370.60	370.70	370.20	370.00	370.30
28.....	370.00	369.90	372.00	374.80	372.00	370.90	370.80	370.70	370.70	370.20	370.00	370.40
29.....	370.00	......	372.90	374.70	372.00	371.00	370.80	370.70	370.60	370.20	370.00	370.40
30.....	370.00	......	373.90	374.60	372.00	371.00	370.85	370.70	370.60	370.10	370.00	370.40
31.....	370.10	......	375.00	......	372.10	......	370.80	370.70	......	370.10	......	370.40

NOTE.— Gage in mouth of Fish creek, excessive discharge from which might cause slight drop between gage and lake.

ONEIDA RIVER DISCHARGE AT CAUGHDENOY

A masonry dam was completed across the Oneida river at Caughdenoy during the summer of 1909. This dam has a substantially level crest 415 feet in length. The crest is at elevation 369.63 and has an ogee cross-section with a slope, or batter, on the upstream portion of the crest of 1 foot rise in 2 feet horizontal width. The downstream portion of the crest is rounded with a radius of 3.24 feet.

During December, 1913, there was completed in the old lock near the dam a vertical lift, counterweighted sluice-gate with sill at Elev. 362.73 and a clear span of thirty feet nine inches. This gate permits of considerable water being passed around the dam.

The upper gage is located about 150 feet above the dam on the right-hand side of the stream. The lower gage is located a short distance below the old lock. The channel at this point is about 350 feet in width, average bottom elevation being 365.0. The discharge over the dam has been calculated from United States

Geological Survey experiments on an ogee cross-section similar in form, allowing for velocity of approach.

The actual discharge from Oneida lake includes, in addition to the water passing Caughdenoy, considerable amounts diverted from the Oneida river above the dam and passed through the Barge canal channel, returning to the river below Caughdenoy. This water has been passed through new lock No. 23 both for lockages and to facilitate construction.

The previously published discharge record for 1913 is not correct; revision not completed.

Discharge for 1914 not yet available.

For elevations of water-surface above dam see pages 124-5.

CHITTENANGO CREEK

DESCRIPTION

Chittenango creek is the principal tributary of Oneida lake from the south. It comprises three main branches, namely, Butternut creek, Limestone creek and Chittenango creek proper. The three branches join near North Manlius. Above the junction of Butternut creek, Chittenango creek flows through an irregular dumbbell-shaped area extending in a northwest and southeast direction. This area lies chiefly in the dissected, hilly region south of the line of the New York Central railroad. The length of the basin is about 22 miles. Its width in the upper portion is 9 miles; in the middle portion, 4 miles; in the lower portion, 7 miles. The drainage basin is deeply rolling, mostly cleared and has a heavy, impervious soil with extensive sodded-meadow areas. The soil is underlaid by shale rock, often outcropping, and affording numerous springs. The stream tributaries are somewhat sparse. Marsh and swamp areas are very limited, with the exception of the Nelson swamp, about two square miles in area.

There were formerly several water-powers in use in the deep narrow valley between Chittenango falls and Chittenango. The outflow from Cazenovia lake is regulated and there is also a reservoir at Erieville. These reservoirs are used to supply the summit level of the Erie canal. The capacities of these reservoirs are given as follows in New York State Barge Canal Report for 1901, page 663:

Erieville Reservoir

Storage capacity	318,424,000 cubic feet
Water-surface	340 acres

Cazenovia Lake

Storage capacity	206,997,000 cubic feet
Water-surface	1.7 square miles

The head of the stream is near Erieville reservoir, which is formed by a dam crossing a small stream valley, formerly tributary to Chenango river through Eaton brook. Cazenovia lake is located 10 miles below Erieville reservoir, which is at the head of the stream at elevation 1,190. From its outlet to the foot of the plateau at Erie canal crossing the stream descends 770 feet, the distance, following the general trend of the valley, being 11 miles. At Chittenango falls there occurs a precipitous descent of about 100 feet.

CHITTENANGO CREEK AT CHITTENANGO

A gaging station was established at Main street highway bridge in Chittenango village, May 22, 1901, by the U. S. Geological Survey, by which it was maintained until July 9, 1905, when it was transferred to the care of this Department. The gaging station is one-half mile above the State dam, diverting water for the supply of the summit level of Erie canal.

Daily Elevation of Water-surface (B. C. Datum) of Chittenango Creek at Chittenango

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	451.57	452.57	452.22	453.47	452.42	451.62	451.62	451.42	451.52	451.47	451.47	451.52
2......	451.52	452.17	452.47	454.22	452.32	451.62	451.52	451.37	451.57	451.52	451.47	451.57
3......	451.57	452.12	452.57	453.27	452.22	451.62	451.47	451.42	452.42	451.47	451.42	451.62
4......	451.52	452.32	452.52	453.17	452.17	451.62	451.47	451.57	451.72	451.52	451.47	451.47
5......	451.52	452.12	452.52	452.82	452.32	451.52	451.42	451.32	451.52	451.52	451.47	451.62
6......	451.82	452.12	452.42	452.62	452.42	451.52	451.47	451.42	451.42	451.42	451.42	451.42
7......	451.52	452.02	452.32	452.62	452.17	451.67	451.52	451.37	451.52	451.52	451.47	451.57
8......	451.47	451.92	452.27	454.22	452.17	452.12	451.47	451.57	451.42	451.47	451.47	451.57
9......	451.47	451.97	452.17	453.62	452.22	451.87	451.47	451.37	451.52	451.47	451.47	451.57
10......	451.52	451.67	452.17	453.27	451.97	451.67	451.42	451.32	451.42	451.32	451.47	451.47
11......	451.57	451.62	451.97	453.52	451.92	451.52	451.47	451.32	451.42	451.42	451.52	451.47
12......	451.52	451.62	451.87	453.32	451.97	451.52	451.52	451.42	451.32	451.62	451.42	451.42
13......	451.77	451.72	451.87	452.72	452.52	451.52	451.57	451.42	451.42	451.47	451.47	451.22
14......	451.67	451.87	451.77	452.12	452.37	451.47	451.52	451.42	451.52	451.47	451.47	451.62
15......	451.72	451.97	451.62	452.02	452.17	451.57	451.52	451.47	451.42	451.42	451.57	451.92
16......	451.67	452.02	451.77	453.37	452.02	451.52	451.47	451.37	451.62	451.37	451.67	451.62
17......	451.57	452.17	452.12	453.17	451.92	451.42	451.52	451.37	451.52	451.42	451.67	451.67
18......	451.67	452.27	452.02	453.07	451.92	451.37	451.42	451.52	451.52	451.47	451.57	451.72
19......	451.72	452.32	451.72	453.02	451.92	451.37	451.47	451.57	451.42	451.52	451.52	451.67
20......	451.77	452.32	451.67	453.32	451.92	451.57	451.57	451.57	451.52	451.52	451.57	451.62
21......	451.77	452.32	451.62	453.17	451.92	451.52	451.42	451.97	451.42	451.47	451.47	451.72
22......	451.87	452.22	451.57	452.97	451.87	451.52	451.42	451.72	451.42	451.42	451.47	451.67
23......	451.77	452.27	451.62	452.67	451.87	451.47	451.47	451.47	451.42	451.37	451.47	451.67
24......	451.82	452.32	451.67	452.52	451.77	451.47	451.77	451.77	451.32	451.37	451.47	451.77
25......	451.72	452.37	451.92	452.57	451.77	451.37	451.52	451.72	451.42	451.47	451.57	451.67
26......	451.77	452.37	453.47	453.12	451.72	451.27	451.52	451.62	451.42	451.47	451.57	451.62
27......	451.72	452.27	454.42	452.92	451.72	451.27	451.47	451.52	451.32	451.37	451.92	451.67
28......	451.87	452.27	454.68	452.72	451.72	451.62	451.52	451.52	451.42	451.42	451.67	451.72
29......	451.92	......	454.07	452.57	451.67	451.92	451.47	451.62	451.32	451.42	451.52	451.87
30......	452.37	......	453.97	452.52	451.62	451.72	451.42	452.07	451.52	451.47	451.37	451.87
31......	452.77	......	454.02	......	451.62	......	451.47	451.67	......	451.42	......	451.67

BUTTERNUT CREEK

DESCRIPTION

The head waters of Butternut creek lie at elevation 1,700 feet, near the south line of Ononodaga county. This stream drains a narrow basin about 24 miles in length and having an average width of about 3 miles. The stream flows in a southerly direction. Jamesville reservoir is located 14 miles below the source at elevation about 640. North of the Erie canal the stream flows out into the flat lands, at elevation about 400, which border Oneida lake for a width of several miles. Butternut creek is joined by Limestone creek near North Manlius at a point about 1½ miles above its junction with Chittenango creek. The Erie canal crosses the stream 4½ miles below Jamesville. Above the Erie canal crossing the slopes are steep and the tributaries are mostly short laterals. Jamesville reservoir has a capacity of 170,000,000 cubic feet. The water-surface area is 252 acres. At a distance of 2.35 miles below Jamesville there is a dam which diverts part of the stream to the Orrville feeder. This feeder is 2.25 miles in length.

BUTTERNUT CREEK NEAR JAMESVILLE

A gaging station was established on Butternut creek at the first bridge above the head of the Orrville feeder, July 25, 1907, by Robert E. Horton, for this Department. The gage is located about 2 miles below Jamesville and measurements at this point will show the supply to the canal available from Jamesville reservoir and the Orrville feeder. A box-and-chain gage is bolted to the hand-rail of the bridge on the upstream side. The current-meter measurements are made from the down-stream side of the bridge, using the face of the right-hand abutments as an initial point. The bridge is subdivided at two-foot intervals and the span is 40 feet. The gage is read at 7 A. M. and 6 P. M. by Marie Brandt Brown.

Daily Gage Height, in Feet, of Butternut Creek near Jamesville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	1.95	2.35	2.25	4.85	2.40	2.20	1.45	1.40	1.45	1.85	1.95	1.95
2.....	1.95	2.35	2.25	4.80	2.35	2.00	1.45	1.45	1.55	1.85	1.95	1.95
3.....	1.95	2.30	2.15	4.80	2.35	1.95	1.40	1.45	1.45	1.85	1.95	1.85
4.....	1.95	2.30	2.15	4.70	2.30	1.95	1.35	1.35	1.45	1.90	1.95	1.85
5.....	2.00	2.25	2.15	4.50	2.35	1.65	1.35	1.35	1.55	1.90	2.00	1.90
6.....	2.05	2.25	2.25	4.65	2.30	1.60	1.40	1.35	1.55	1.85	2.00	1.95
7.....	2.05	2.25	2.20	4.70	2.25	1.60	1.40	1.35	1.65	1.95	2.05	1.95
8.....	2.00	2.20	1.95	4.75	2.30	1.60	1.35	1.35	1.60	1.95	2.05	1.95
9.....	2.05	2.25	1.95	4.65	2.30	1.65	1.35	1.35	1.55	2.05	2.05	1.90
10.....	2.00	2.30	1.95	4.50	2.45	1.60	1.30	1.45	1.45	2.00	2.10	1.85
11.....	2.15	2.25	1.85	4.55	2.55	1.55	1.40	1.40	1.35	1.95	2.10	1.85
12.....	2.15	2.25	1.85	4.55	2.55	1.60	1.40	1.45	1.35	1.95	2.10	1.85
13.....	2.20	2.15	1.90	4.45	2.65	1.55	1.35	1.40	1.35	1.95	2.05	1.85
14.....	2.20	2.15	1.90	4.35	2.70	1.45	1.25	1.35	1.35	2.00	2.15	1.80
15.....	2.20	2.15	1.95	4.30	2.65	1.45	1.25	1.35	1.45	2.00	2.10	1.75
16.....	2.15	2.20	2.05	4.35	2.70	1.55	1.25	1.35	1.45	1.90	2.05	1.75
17.....	2.15	2.15	2.25	4.25	2.65	1.55	1.25	1.35	1.45	2.00	2.15	1.75
18.....	2.15	2.10	2.25	4.25	2.65	1.60	1.30	1.35	1.45	2.00	2.20	1.80
19.....	2.20	2.10	2.45	4.25	2.65	1.70	1.35	1.30	1.35	1.95	2.10	1.80
20.....	2.15	2.15	2.65	4.30	2.75	1.70	1.35	1.30	1.45	1.85	2.05	1.85
21.....	2.10	2.15	3.00	4.30	2.75	1.75	1.35	1.25	1.45	1.95	2.05	1.80
22.....	2.05	2.15	3.00	4.25	2.65	1.65	1.35	1.25	1.55	2.00	2.00	1.75
23.....	2.15	2.15	3.15	4.20	2.65	1.55	1.30	1.30	1.55	2.00	1.95	1.75
24.....	2.05	2.15	3.35	4.20	2.60	1.50	1.25	1.30	1.60	2.05	1.90	1.75
25.....	2.05	2.15	3.65	4.25	2.60	1.45	1.25	1.25	1.70	2.05	1.90	1.80
26.....	2.15	2.20	4.00	4.35	2.50	1.45	1.20	1.25	1.70	2.00	1.85	1.85
27.....	2.25	2.20	5.00	4.25	2.45	1.55	1.30	2.00	1.85	1.95	1.85	1.85
28.....	2.25	2.20	5.10	4.25	2.45	1.65	1.35	2.00	1.85	1.95	1.90	1.85
29.....	2.25	......	5.05	4.25	2.45	1.55	1.30	2.00	1.90	1.85	1.85	1.85
30.....	2.35	......	5.00	4.25	2.45	1.55	1.30	1.90	1.90	1.95	1.85	1.85
31.....	2.40	......	5.00	......	2.45	......	1.40	2.05	......	1.95	......	1.85

Daily Discharge, in Second-feet, of Butternut Creek near Jamesville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	94	150	134	*b* 620	158	126	42	38	42	82	94	94
2.....	94	150	134	*b* 620	150	100	42	42	51	82	94	94
3.....	94	142	119	*b* 620	150	94	38	42	42	82	94	82
4.....	94	142	119	*b* 620	142	94	34	34	42	88	94	82
5.....	100	134	119	*b* 620	150	61	34	34	51	88	100	88
6.....	106	134	134	*b* 620	142	56	38	34	51	82	100	94
7.....	106	134	126	*b* 620	134	56	38	34	61	94	106	94
8.....	100	126	94	*b* 620	142	56	34	34	56	94	106	94
9.....	106	134	94	*b* 620	142	61	34	34	51	106	106	88
10.....	100	142	94	*b* 620	167	56	30	42	42	100	112	82
11.....	119	134	82	*b* 620	186	51	38	38	34	94	112	82
12.....	119	124	82	*b* 620	186	56	38	42	34	94	112	82
13.....	126	119	88	*b* 620	206	51	34	38	34	94	106	82
14.....	126	119	88	*b* 620	216	42	26	34	34	100	119	76
15.....	126	119	94	*b* 620	206	42	26	34	42	100	112	71
16.....	119	126	106	*b* 620	216	51	26	34	42	88	106	71
17.....	119	119	134	*b* 620	206	51	26	34	42	100	119	71
18.....	119	112	134	*b* 620	206	56	30	34	42	100	126	76
19.....	126	112	167	*b* 620	206	66	34	30	34	94	112	76
20.....	119	119	206	*b* 620	226	66	34	30	42	82	106	82
21.....	112	119	280	*b* 620	226	71	34	26	42	94	106	76
22.....	106	119	280	*b* 620	206	61	34	26	51	100	100	71
23.....	119	119	317	*b* 620	206	51	30	30	51	100	94	71
24.....	106	119	371	*b* 620	196	46	26	30	56	106	88	71
25.....	106	119	459	*b* 620	196	42	26	26	66	106	88	76
26.....	119	126	620	*b* 620	176	42	22	26	66	100	82	82
27.....	134	126	*b* 620	*b* 620	167	51	30	100	82	94	82	82
28.....	134	126	*b* 620	*b* 620	167	61	34	100	82	94	88	82
29.....	134	......	*b* 620	*b* 620	167	51	30	100	88	82	82	82
30.....	150	......	*b* 620	*b* 620	167	51	30	88	88	94	82	82
31.....	158	......	*b* 620	......	167	......	38	106	......	94	......	82
Mean...	116	128	251	*b* 620	180	61	33	44	51	94	101	81

b Limit of rating table; actual discharge greater.

Monthly Discharge of Butternut Creek near Jamesville
[Drainage area, 53 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	158	94	116	2.19	2.53
February	150	112	128	2.42	2.52
March	*b* 620	82	251	4.74	5.47
April	*b* 620	*b* 620	*b* 620	*b* 11.70	*b* 13.05
May	226	134	180	3.40	3.92
June	126	42	61	1.15	1.28
July	42	22	33	0.62	0.71
August	106	26	44	0.83	0.96
September	88	34	51	0.96	1.07
October	106	82	94	1.77	2.04
November	126	82	101	1.91	2.13
December	94	71	81	1.53	1.76
The year	*b* 620	22	146	2.76	37.44

b Limit of rating table; actual discharge greater.

LIMESTONE CREEK

DESCRIPTION

The natural source of Limestone creek is on the slope of Tinselor hills near Erieville, Madison county, N. Y. In the construction of the Chenango canal, Tioughnioga creek was diverted and DeRuyter reservoir receives the drainage tributary to this stream above the point of diversion and also that from additional area tributary to Limestone creek, making a total area above the reservoir outlet of 18.8 square miles. The reservoir has a capacity of 504,468,000 cubic feet and a surface area of about 1.0 square mile. The stored waters are discharged through Limstone creek during the canal navigation season. Water is diverted to a feeder by a dam below Manlius. The feeder is used as a water-power canal to supply several mills at Fayetteville, at which place there is a second diverting dam. The feeder enters Erie canal 1.2 miles below Fayetteville. Power is also developed on Limestone creek at Manlius and Edwards Falls. The head waters of Limestone creek are at elevation 1,900 feet. DeRuyter reservoir is at elevation 1,286 feet. The fall of the stream is rapid in the first three miles below the reservoir, the elevation at the lower end of this reach at Delphi being 900 feet. From Delphi to Buellville the creek follows a winding course over a flat valley bottom averaging about one-half mile in width. The descent in 8 miles between these points is 150 feet. Between Buellville and Manlius, a distance of two miles, a fall of 200 feet occurs. This is mostly concentrated at Edwards Falls. The west, or Watervale branch of Limestone creek joins the main stream below Manlius. The precipitous descent of about 100 feet in a short distance occurs at this branch at Stone Quarry Falls. The drainage basin is shown on the Syracuse, Tully, Chittenango and Cazenovia sheets of the United State Geological Survey topographical map.

LIMESTONE CREEK AT FAYETTEVILLE

This gaging station, which is located above the State dam at the head of the Erie canal feeder in Fayetteville, was established August 27, 1905, by this Department.

The gage is a vertical board, graduated in feet and tenths, and is secured to retaining wall on south side of gates at entrance to feeder, about 55 feet above crest of dam. The elevation of zero of gage is 429.53. The elevation of bench-mark on east end of north retaining wall of feeder, 42 feet east of gates, is 434.74. Observations are taken twice daily.

The dam is of masonry and in good condition, having been rebuilt in 1897. It is of trapezoidal shape with an approach slope of 1 to 6 and vertical downstream face. The length of crest is 99.1 feet at an average elevation of 431.18.

The flow in the feeder is controlled by gateways at entrance. There are four openings in the bulkhead, which are regulated by means of drop planks.

A gage is maintained in the canal feeder at Fayetteville during the period the feeder is in use. Water is also diverted through the cement mill on east side of creek.

A separate gaging station was established at Manlius in July, 1907, to determine the low-water flow, which is now used for all stages. Discharge computation at this station has been abandoned.

Daily Elevation of Water-surface (B. C. Datum) of Limestone Creek above Dam at Fayetteville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	430.83	432.53	432.13	431.48	431.63	430.83	431.43	429.88	430.98	431.13	431.33	431.53
2.....	431.53	432.08	432.03	431.78	431.53	430.78	431.43	430.03	432.18	430.53	431.23	431.13
3.....	431.38	431.98	431.93	431.43	431.48	430.83	431.38	429.78	431.58	430.53	430.33	431.33
4.....	431.38	431.98	431.93	431.23	431.38	430.93	431.23	429.98	431.53	431.23	430.28	431.33
5.....	431.53	431.83	432.08	431.78	431.43	430.83	430.93	429.73	431.53	431.23	430.63	431.43
6.....	431.18	431.43	431.63	431.73	431.73	430.73	430.98	430.13	431.53	429.63	431.13	430.98
7.....	431.33	431.28	431.63	431.83	431.63	430.73	430.98	429.93	431.53	429.63	431.03	431.08
8.....	431.33	431.33	431.53	433.28	431.63	431.13	430.93	429.78	431.53	429.63	431.13	431.23
9.....	431.28	431.23	431.53	432.93	431.53	431.13	431.13	429.88	431.53	429.63	430.93	430.93
10.....	431.13	431.13	431.93	432.58	431.63	431.13	431.13	429.93	431.13	429.63	430.98	431.03
11.....	431.23	431.23	431.33	432.13	431.53	431.03	431.13	430.13	430.53	*a*	430.83	431.13
12.....	431.13	431.13	431.13	432.43	431.53	431.03	430.53	430.08	430.58	*a*	430.93	431.13
13.....	431.28	431.28	431.13	431.93	432.78	430.53	430.53	429.63	430.43	429.63	431.23	431.03
14.....	431.23	431.53	431.23	431.98	432.88	430.53	429.83	429.83	430.63	429.63	430.73	431.13
15.....	431.13	431.53	431.53	432.03	431.93	430.53	429.83	430.53	430.38	429.73	431.28	430.93
16.....	431.13	431.63	431.58	432.13	431.63	430.53	429.93	430.53	430.38	429.83	431.33	431.13
17.....	431.13	431.33	431.78	431.93	431.53	430.63	429.63	430.53	430.53	429.93	430.83	431.53
18.....	431.13	431.28	431.88	431.88	431.43	430.53	430.93	430.38	431.13	430.53	430.53	431.33
19.....	431.23	431.13	431.33	431.83	431.38	430.78	430.63	430.33	430.83	430.53	431.28	431.43
20.....	431.13	431.23	431.23	431.98	431.33	431.13	430.43	430.78	430.73	431.23	431.33	431.18
21.....	431.23	431.53	431.28	432.33	431.18	431.13	429.98	431.53	430.53	430.93	431.13	431.53
22.....	431.13	431.23	431.23	432.23	431.08	431.13	429.83	431.18	430.43	430.93	431.23	431.53
23.....	431.08	431.23	431.28	432.13	431.33	431.03	430.53	431.53	430.33	430.83	431.33	431.53
24.....	431.13	431.18	431.28	432.08	431.03	431.03	430.53	431.53	430.53	430.63	431.13	431.33
25.....	431.43	431.33	431.63	432.03	430.83	430.93	430.53	431.43	430.63	431.28	431.13	431.23
26.....	431.48	431.38	433.18	432.58	430.88	430.93	430.53	431.23	430.93	431.18	431.18	431.53
27.....	431.53	[illegible].53	434.18	432.63	430.93	430.83	430.53	431.13	431.43	431.13	431.13	431.53
28.....	431.68	431.53	434.38	432.23	431.03	430.93	430.53	431.13	431.33	431.33	431.53	431.43
29.....	432.18	......	434.08	432.08	431.13	431.63	430.53	431.18	431.13	431.13	431.53	431.33
30.....	432.48	......	433.58	432.13	431.13	431.53	430.23	431.53	431.98	431.23	431.53	431.33
31.....	432.53	......	431.78	......	430.83	......	430.83	431.53	......	431.13	......	431.53

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Limestone Feeder at Fayetteville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	......	429.27	429.52	429.32	429.32	429.42	429.42	......
2	......	......	......	......	......	429.22	429.32	429.32	429.42	429.42	429.52	......
3	......	......	......	......	......	429.32	429.32	429.42	429.47	429.42	429.42	......
4	......	......	......	......	......	429.47	429.22	429.42	429.42	429.52	429.42	......
5	......	......	......	......	......	429.42	429.22	429.42	429.42	429.52	429.42	......
6	......	......	......	......	......	429.42	429.22	429.12	429.32	429.52	429.62	......
7	......	......	......	......	......	429.42	429.22	429.22	429.32	429.62	429.82	......
8	......	......	......	......	......	429.42	429.22	429.12	429.32	429.82	429.82	......
9	......	......	......	......	......	429.42	429.12	429.22	429.32	429.62	429.82	......
10	......	......	......	......	......	429.42	429.12	429.22	429.22	429.52	429.82	......
11	......	......	......	......	......	429.32	429.22	429.22	429.22	429.42	429.82	......
12	......	......	......	......	......	429.02	429.32	429.22	429.22	429.42	429.42	......
13	......	......	......	......	......	428.92	429.32	429.22	429.32	429.42	429.42	......
14	......	......	......	......	......	428.92	429.32	429.22	429.32	429.52	429.32	......
15	......	......	......	......	......	428.82	429.32	429.22	429.22	429.42	429.82	......
16	......	......	......	......	......	429.02	429.32	429.22	429.32	429.42	429.52	......
17	......	......	......	......	......	429.12	429.32	429.22	429.42	429.52	429.82	......
18	......	......	......	......	......	429.12	429.12	429.32	429.22	429.52	428.42	......
19	......	......	......	......	......	429.32	429.22	429.42	429.22	429.52	429.42	......
20	......	......	......	......	......	429.32	429.22	429.47	429.22	429.52	429.42	......
21	......	......	......	......	428.32	429.42	429.22	429.52	429.22	429.42	429.42	......
22	......	......	......	......	428.82	429.42	429.22	429.52	429.32	429.42	425.52	......
23	......	......	......	......	428.97	429.42	429.32	429.42	429.32	429.47	425.62	......
24	......	......	......	......	429.17	429.42	429.52	429.42	429.42	429.42	429.42	......
25	......	......	......	......	429.32	429.32	429.52	429.52	429.27	429.52	429.42	......
26	......	......	......	......	429.32	429.32	429.52	429.47	429.27	429.42	429.42	......
27	......	......	......	......	429.22	429.32	429.52	429.42	429.22	429.42	429.82	......
28	......	......	......	......	429.22	429.42	429.42	429.42	429.32	429.12	428.72	......
29	......	......	......	......	429.32	429.72	429.32	429.47	429.32	429.22	*a*	......
30	......	......	......	......	429.22	429.62	429.37	429.52	429.42	429.32	*a*	......
31	......	......	......	......	429.22	......	429.32	429.52	......	429.37	......	......

a No record; canal closed.

LIMESTONE CREEK AT MANLIUS

A gaging station was established July 23, 1907, by this Department, at Wilcox avenue bridge in Manlius. The gage is a chain gage attached to the bottom chord of the downstream side of the bridge.

Daily Gage Height, in Feet, of Limestone Creek at Manlius

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	3.40	4.20	3.50	6.80	3.40	2.70	2.70	2.50	2.90	2.50	2.60	2.70
2.....	3.10	3.80	3.20	5.60	3.40	2.60	2.70	2.50	2.80	2.60	2.60	2.60
3.....	3.00	3.90	3.00	4.50	3.30	2.60	2.80	2.50	3.00	2.60	2.50	2.80
4.....	2.80	3.80	3.00	4.00	3.20	2.60	2.80	2.40	3.30	2.50	2.50	2.80
5.....	3.00	3.80	3.00	3.60	3.40	2.60	2.70	2.40	3.00	2.50	2.50	2.80
6.....	2.80	3.90	3.20	3.40	3.30	2.70	2.70	2.50	3.00	2.50	2.60	2.70
7.....	2.80	3.80	3.00	4.75	3.30	2.70	2.70	2.50	3.20	2.40	2.50	2.70
8.....	2.70	3.80	3.00	5.70	3.20	2.70	2.60	2.50	3.30	2.50	2.60	2.60
9.....	3.00	3.90	3.00	4.80	3.00	3.00	2.60	2.50	3.10	2.60	2.60	2.60
10.....	3.10	3.70	3.00	4.00	3.00	3.20	2.50	2.50	3.00	2.50	2.60	2.60
11.....	2.80	3.60	2.80	3.80	3.20	3.00	2.40	2.50	2.80	2.60	2.50	2.60
12.....	2.80	3.30	2.90	4.00	3.50	2.90	2.40	2.50	2.80	2.60	2.60	2.60
13.....	3.20	3.00	2.80	3.80	3.60	2.70	2.40	2.50	2.80	2.60	2.70	2.60
14.....	3.00	3.00	2.80	3.80	3.40	2.70	2.40	2.50	2.70	2.50	2.70	2.50
15.....	3.00	3.00	3.00	3.80	3.40	2.70	2.50	2.70	2.70	2.70	2.80	2.50
16.....	2.90	3.00	3.20	3.70	3.20	2.60	2.60	2.60	2.70	2.70	2.70	2.60
17.....	3.00	3.00	3.40	3.40	3.20	2.60	2.70	2.60	2.80	2.80	2.60	2.60
18.....	2.80	3.00	3.70	3.60	3.20	2.60	2.70	2.50	2.80	2.80	2.60	2.70
19.....	2.80	2.90	3.00	3.50	3.10	2.70	2.50	2.50	2.80	2.70	2.50	2.60
20.....	2.80	3.00	2.80	3.50	3.00	2.80	2.50	2.50	2.60	2.60	2.50	2.60
21.....	2.70	2.80	3.00	3.80	3.00	2.70	2.50	3.00	2.60	2.60	2.40	2.60
22.....	2.60	2.80	3.40	3.80	3.00	2.70	2.40	2.80	2.50	2.60	2.50	2.70
23.....	2.70	2.80	3.40	3.60	3.00	2.60	2.50	2.80	2.50	2.50	2.60	2.70
24.....	2.90	3.00	4.00	3.40	3.00	2.60	2.80	2.90	2.50	2.50	2.70	2.60
25.....	3.20	3.00	4.50	3.40	2.90	2.60	2.80	2.90	2.70	2.60	2.70	2.70
26.....	3.00	3.00	5.20	3.60	2.70	2.60	2.70	2.70	2.80	2.60	2.60	2.70
27.....	3.00	3.20	6.10	3.70	2.60	2.60	2.70	2.60	2.80	2.60	2.70	2.50
28.....	3.20	3.30	6.80	3.50	2.60	2.80	2.60	2.50	2.80	2.60	2.70	2.60
29.....	3.80	......	6.40	3.60	2.60	3.10	2.60	2.70	2.60	2.50	2.80	2.60
30.....	4.20	......	5.80	3.40	2.60	2.90	2.50	3.20	2.50	2.50	2.80	2.70
31.....	4.00	......	6.00	......	2.70	......	2.40	3.00	......	2.60	......	2.80

Daily Discharge, in Second-feet, of Limestone Creek at Manlius

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.	202	356	220	*b* 578	202	80	80	52	112	52	64	80
2.	146	280	164	*b* 578	202	64	80	52	94	64	64	64
3.	128	298	128	422	184	64	94	52	128	64	52	94
4.	94	280	128	318	154	64	94	40	184	52	52	94
5.	128	280	128	240	202	64	80	40	128	52	52	94
6.	94	298	164	202	184	80	80	52	128	52	64	80
7.	94	280	128	484	184	80	80	52	164	40	52	80
8.	80	280	128	*b* 578	164	80	64	52	184	52	64	64
9.	128	298	128	496	128	128	64	52	146	64	64	64
10.	146	260	128	318	128	164	52	52	128	52	64	64
11.	94	240	94	280	164	128	40	52	94	64	52	64
12.	94	184	112	318	220	112	40	52	94	64	64	64
13.	164	128	94	280	240	80	40	52	94	64	80	64
14.	128	128	94	280	202	80	40	52	80	52	80	52
15.	128	128	128	280	202	80	52	80	80	80	94	52
16.	112	128	164	260	164	64	64	64	80	80	80	64
17.	128	128	202	202	164	64	80	64	94	94	64	64
18.	94	128	260	240	164	64	80	52	94	94	64	80
19.	94	112	128	220	146	80	52	52	94	80	52	64
20.	94	128	94	220	128	94	52	52	64	64	52	64
21.	80	94	128	280	128	80	52	128	64	64	40	64
22.	64	94	202	280	128	80	40	94	52	64	52	80
23.	80	94	202	240	128	64	52	94	52	52	64	80
24.	112	128	318	202	128	64	94	112	52	52	80	64
25.	164	128	422	202	112	64	94	112	80	64	80	80
26.	128	128	*b* 578	240	80	64	80	80	94	64	64	80
27.	128	164	*b* 578	260	64	64	80	64	94	64	80	52
28.	164	184	*b* 578	220	64	94	64	52	94	64	80	64
29.	280	. . . . . .	*b* 578	240	64	146	64	80	64	52	94	64
30.	356	. . . . . .	*b* 578	202	64	112	52	164	52	52	94	80
31.	318	. . . . . .	*b* 578	. . . . . .	80	. . . . . .	40	128	. . . . . .	64	. . . . . .	94
Mean. . .	137	191	244	305	148	85	65	70	99	62	67	71

b Limit of rating curve; actual discharge greater.

Monthly Discharge of Limestone Creek at Manlius
[Drainage area, 67 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January.	356	64	137	2.04	2.35
February.	356	94	191	2.85	2.97
March.	*b* 578	94	244	3.64	4.20
April.	*b* 578	202	305	4.55	5.08
May.	240	64	148	2.21	2.55
June.	164	64	85	1.27	1.42
July.	94	40	65	0.97	1.12
August.	164	40	70	1.04	1.20
September.	184	52	99	1.48	1.65
October.	94	40	62	0.93	1.07
November.	94	40	67	1.00	1.12
December.	94	52	71	1.06	1.22
The year.	*b* 578	40	128	1.91	25.95

b Limit of rating curve; actual discharge greater.

ONEIDA CREEK

DESCRIPTION

The head waters of Oneida creek are in northeastern Madison county. Above Peterboro the drainage is mostly through a swamp averaging one-half mile in width by 2½ miles in length. The stream flows easterly from this swamp to the foot of the falls above Munnsville. In the vicinity of the falls the stream descends from elevation 1,100 to elevation 700 in about three miles. From Munnsville to Oneida the creek flows through a somewhat dissected valley of one mile average width, bordered by steep slopes rising 500 feet or more within a distance of one mile on either side. North of Oneida Castle the drainage is rather flat. Oneida creek enters the eastern end of Oneida lake near South Bay, the elevation of the lake being at 370. Water-power is utilized at Oneida Community and at Munnsville. A feeder dam at Oneida Castle diverts most of the low-water flow to the Erie canal through a feeder 2.9 miles long, entering the canal at Durhamville. The drainage basin as a whole is irregularly pear-shaped and the upper basin is broad. The slopes are steep and the tributaries are well distributed and moderately branching. This basin is shown on the Morrisville, Oneida, Chittenango and Cazenovia sheets of the U. S. Geological Survey topographic map.

ONEIDA CREEK AT KENWOOD

A gaging station was established at the Oneida Community dam and silk mill, June 11, 1907, by Robert E. Horton. The dam is of timber, having a crest length of 79.25 feet. The crest is nearly level and the cross-section is uniform throughout the entire length. The silk mill contains one 24-inch Hercules and one 24-inch Camden water-wheel. Records are kept by A. H. Mason, showing the crest and tail-race gage readings each morning and night, together with the gate opening and number of hours run per day for each water-wheel. Current-meter measurements were made in the tail-race to determine the turbine discharge in 1907.

Daily Discharge in Second-feet, of Oneida Creek at Kenwood

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	81	*134	*109	620	125	9	27	57	96	60	*75	88
2	85	110	86	603	125	5	24	*44	92	53	93	109
3	81	89	75	401	*115	6	20	40	84	54	82	95
4	*86	94	77	347	109	9	16	35	69	*55	74	81
5	86	109	82	*175	96	6	*16	40	64	69	59	75
6	70	115	96	103	182	9	16	33	*55	51	50	*68
7	84	91	95	193	147	*5	12	29	55	58	55	75
8	99	*81	*95	1,547	135	1,615	8	19	60	58	*75	81
9	107	85	81	535	109	304	12	*24	53	69	93	81
10	83	93	86	250	*95	213	10	36	59	55	84	95
11	*81	92	81	283	75	183	8	39	64	*68	81	81
12	89	82	81	*203	81	150	*3	28	61	68	82	81
13	83	88	95	211	244	116	11	25	*68	64	75	*81
14	77	71	103	157	141	*86	10	23	69	57	68	95
15	84	*81	*109	175	116	57	12	16	64	57	*86	81
16	101	94	283	312	86	35	13	*24	68	51	108	75
17	90	82	366	284	*75	40	15	39	59	42	92	68
18	*81	75	304	271	68	32	16	28	53	*44	81	68
19	93	86	237	*271	61	18	*4	39	47	46	75	81
20	120	90	175	355	55	40	16	105	*50	42	69	*76
21	94	79	147	325	61	*20	10	134	68	38	60	68
22	100	*81	*140	247	55	21	13	86	64	44	*60	81
23	109	74	109	185	60	13	14	*81	60	51	74	81
24	130	68	103	134	*60	9	13	60	53	54	77	68
25	*103	61	245	115	55	8	8	66	58	*55	84	68
26	109	66	801	*271	48	11	*17	55	62	67	95	55
27	109	81	1,244	203	40	10	3	71	*55	59	81	*68
28	278	91	1,709	158	46	*3	13	97	68	52	81	68
29	349	......	*718	140	40	80	14	117	60	51	*95	81
30	409	......	572	157	20	33	14	*115	51	68	82	87
31	315	......	267	......	*24	......	13	97	......	54	......	81
Mean	125	87	283	308	89	105	13	55	63	55	78	79

* Sunday.

Monthly Discharge of Oneida Creek at Kenwood
[Drainage area, 63 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	409	70	125	1.98	2.28
February	134	61	87	1.38	1.44
March	1,709	75	283	4.49	5.18
April	1,547	103	308	4.89	5.46
May	244	20	89	1.41	1.63
June	1,615	3	105	1.67	1.86
July	27	3	13	0.206	0.24
August	134	16	55	0.873	1.01
September	96	47	63	1.00	1.12
October	69	38	55	0.873	1.01
November	108	50	78	1.24	1.38
December	109	55	79	1.25	1.44
The year	1,709	3	112	1.77	24.05

SENECA RIVER BASIN

DESCRIPTION

Seneca river receives the drainage from the central group of lakes lying southward from Lake Ontario, known as the finger lakes. The drainage basin is rolling, though not precipitous, excepting for the deep narrow valleys crossing it, in which the lakes are situated, and certain additional valleys not at the present time occupied by lakes. All of the lakes properly belonging to the finger lake system do not drain into the Seneca river. Oneida lake on the east is tributary to Oneida river, while on the west of the Seneca river there is a series of lakes, including Honeoye, Canadice, Hemlock and Conesus lakes, smaller than, but parallel with and otherwise similar to the main finger lakes, which are tributary to Genesee river. The upper lakes of the system in the Seneca river basin are Onondaga, Otisco, Skaneateles, Owasco, Cayuga, Seneca, Keuka and Canandaigua lakes.

SENECA RIVER

DESCRIPTION

The stream designated as Seneca river originates at the outlet of Seneca lake, flows easterly to the foot of Cayuga lake, which discharges into it, and then northerly through the extensive Montezuma marches to a point near Savannah, where it leaves the broad marsh area and turns easterly, passing to the north of Syracuse and receiving Onondaga outlet, then turning northerly and joining Oneida river at Three River Point to form the Oswego river. The most important tributaries of Seneca river are the outlets of Onondaga, Otisco, Skaneateles and Owasco lakes, and Clyde river, which enters the Seneca river near Clyde and which in turn is formed by the junction of Mud creek and Canandaigua outlet at Lyons.

SENECA RIVER WATER-SURFACE RECORDS

The following tables show the mean daily elevation of water-surface at different gages maintained on Seneca river during the year 1914.

SENECA RIVER, BELGIUM TO FOX RIDGE

Daily Elevation of Water-surface (B. C. Datum) of Seneca River at Highway Bridge at Belgium

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	*a*	365.15	364.55	369.35	369.95	364.35	363.70	363.05	364.50	364.00	363.74	363.95
2	*a*	365.30	364.55	369.75	366.65	364.30	363.55	363.15	364.45	363.95	363.99	364.01
3	*a*	365.45	364.35	370.00	366.35	364.20	363.65	363.35	364.55	363.90	363.87	364.13
4	*a*	365.65	364.20	369.95	365.95	364.20	363.65	363.25	364.75	363.90	363.81	364.01
5	*a*	365.65	364.10	369.80	366.05	364.15	363.70	363.20	364.75	364.05	363.76	363.97
6	*a*	365.55	364.10	369.70	366.05	364.10	363.70	363.15	364.60	363.95	363.72	363.09
7	*a*	365.45	363.90	369.60	366.05	364.15	363.60	363.10	364.65	363.95	363.68	364.03
8	*a*	365.35	363.95	369.50	366.05	364.40	363.55	362.85	364.65	363.90	363.76	363.85
9	*a*	365.10	363.95	369.65	365.95	364.40	363.55	362.75	364.55	363.85	364.06	363.77
10	*a*	365.00	364.00	369.85	365.85	364.20	363.55	363.10	364.45	363.85	363.81	363.82
11	*a*	364.90	364.00	369.85	365.75	364.10	363.50	363.15	364.45	363.85	363.71	363.76
12	*a*	364.75	363.95	369.75	365.75	364.05	363.70	363.10	364.45	363.95	363.62	363.71
13	*a*	364.65	363.75	369.75	365.75	363.95	363.65	363.05	364.45	363.90	363.06	363.75
14	*a*	364.65	363.55	369.60	365.85	364.10	363.55	363.10	364.45	363.90	363.55	363.98
15	363.65	364.60	363.65	369.40	366.35	364.25	363.55	363.00	364.55	363.90	363.07	363.65
16	363.65	364.60	363.45	369.20	366 45	363.85	363.55	362.90	364.55	363.90	364.16	363.61
17	363.65	364.55	363.55	369.15	366.45	363.80	363.50	363.10	364.55	363.95	363.71	363.51
18	363.60	364.50	363.85	369.15	365.95	363.70	363.60	363.00	364.55	363.90	363.65	363.41
19	363.65	364.35	363.85	369.05	365.75	363.60	363.85	362.85	364.50	364.00	363.07	363.04
20	363.65	364.25	364.00	368.70	365.65	363.60	363.95	362.85	364.35	363.95	363.07	363.05
21	363.65	364.25	364.00	368.50	365.55	363.70	364.25	363.00	364.35	363.90	363.61	363.72
22	363.60	364.35	364.00	368.55	365.55	363.65	363.60	362.85	364.25	363.85	363.65	363.65
23	363.55	364.35	364.00	368.45	365.05	363.75	363.45	362.75	364.15	363.90	363.95	363.06
24	363.45	364.40	363.95	368.25	364.30	363.80	363.50	363.35	364.05	363.95	363.08	363.53
25	363.55	364.50	363.95	368.10	364.45	363.65	363.40	363.50	364.00	363.95	363.07	363.57
26	363.65	364.50	364.65	368.20	364.50	363.65	363.40	363.60	363.95	364.05	363.07	363.76
27	363.65	364.55	366.25	367.95	364.30	363.60	363.60	363.70	363.95	363.90	363.08	363.71
28	363.75	364.50	367.35	368.20	364.25	363.75	363.45	364.00	364.15	363.75	363.75	363.76
29	364.00	......	*a*	367.95	364.10	364.05	363.30	364.20	364.10	363.65	363.85	363.58
30	364.25	......	367.45	367.60	363.95	363.75	363.25	364.40	364.05	363.41	364.21	363.57
31	364.55	......	368.90	......	364.05	......	363.20	364.65	......	363.41	......	363.53

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Seneca River at Mud Lock, near Long Branch, Liverpool P. O.

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	363.47	365.17	364.57	*a*	367.37	364.97	363.87	363.67	364.87	364.17	363.67	363.77
2	363.37	365.37	364.57	*a*	367.07	364.87	363.87	363.57	364.87	364.07	363.67	363.77
3	363.37	365.67	364.57	......	366.97	364.87	363.87	363.57	364.97	363.97	363.67	363.87
4	363.47	365.87	364.47	......	366.67	364.77	363.77	363.47	365.07	363.97	363.77	364.07
5	363.47	365.87	364.37	......	366.27	364.77	363.67	363.47	364.97	363.97	363.77	364.07
6	363.47	365.67	364.37	......	366.17	364.67	363.77	363.37	365.07	364.07	363.77	364.07
7	363.47	365.57	364.27	......	365.97	364.67	363.87	363.27	364.97	364.17	363.87	364.07
8	363.67	365.47	364.27	......	365.67	364.87	363.87	362.97	364.97	364.07	363.77	363.97
9	363.87	365.47	364.17	......	365.37	364.87	363.77	362.97	364.87	364.07	363.77	363.87
10	363.87	365.37	363.97	......	365.47	364.77	363.77	362.87	364.77	364.07	363.77	363.87
11	363.87	365.37	363.87	......	365.67	364.77	363.77	362.87	364.87	363.97	363.77	363.87
12	363.87	365.17	363.77	......	365.67	364.57	363.67	362.97	364.87	363.97	363.87	363.77
13	363.67	365.07	363.67	......	365.87	364.57	363.67	362.97	364.97	363.87	363.87	363.77
14	363.67	364.97	363.67	......	366.27	364.57	363.67	363.17	364.97	363.87	363.97	363.77
15	363.67	365.07	363.67	......	366.27	364.47	363.77	363.17	364.97	363.87	363.97	363.77
16	363.67	364.97	363.67	......	366.37	364.47	363.77	363.27	364.87	363.87	364.07	363.67
17	363.67	364.87	363.77	......	366.17	364.37	363.97	363.27	364.87	363.97	364.07	363.67
18	363.67	364.87	363.87	......	366.07	363.87	364.07	363.37	364.77	363.97	363.97	363.67
19	363.67	364.87	363.87	......	365.87	363.87	364.07	363.47	364.67	363.97	363.87	363.67
20	363.67	364.87	363.87	......	365.67	363.87	364.07	363.57	364.37	363.97	363.87	363.77
21	363.67	364.77	363.87	......	365.57	363.87	364.07	363.57	364.37	364.07	363.77	363.87
22	363.57	364.67	363.97	......	365.37	364.27	363.87	363.57	364.37	364.07	363.77	363.87
23	363.57	364.57	364.07	......	365.27	363.97	363.77	363.67	364.37	363.97	363.77	363.97
24	363.57	364.57	364.07	......	365.07	363.97	363.77	363.77	364.27	363.97	363.87	363.87
25	363.57	364.57	364.17	......	364.97	363.87	363.77	363.87	364.17	363.87	363.87	363.87
26	363.67	364.57	364.97	......	364.97	363.87	363.67	364.07	364.17	363.87	363.87	363.87
27	363.67	364.57	366.97	......	364.97	363.97	363.67	364.27	364.17	363.97	363.77	363.97
28	363.77	364.57	367.97	......	365.07	364.07	363.77	364.37	364.17	363.97	363.67	363.97
29	364.07	......	368.87	......	365.07	363.97	363.67	364.47	364.17	363.87	363.67	363.97
30	364.47	......	*a*	......	364.97	363.97	363.57	364.87	364.17	363.87	363.77	364.07
31	364.77	......	*a*	......	364.97	......	363.67	364.87	......	363.77	......	364.07

a No record. April record doubtful; not published.

Daily Elevation of Water-surface (B. C. Datum) of Seneca River below Dam at Baldwinsville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	364.30	365.80	365.25	370.85	368.40	365.55	364.65	363.90	365.35	364.65	364.75	364.23
2......	364.25	366.25	365.47	371.27	368.05	365.70	364.50	363.80	365.20	364.60	364.65	364.30
3......	364.25	366.35	365.25	371.50	367.65	365.75	364.43	364.20	365.60	364.45	364.55	364.30
4......	364.10	366.35	365.17	371.50	367.30	365.80	364.30	364.25	365.75	364.25	364.35	364.30
5......	364.45	366.33	365.17	371.35	367.25	365.80	364.30	364.25	365.65	364.55	364.53	364.30
6......	364.45	366.17	365.10	371.05	367.25	365.95	364.45	364.15	365.40	364.50	364.55	364.65
7......	364.25	366.03	365.10	371.05	367.25	365.90	364.43	364.15	365.65	364.45	364.65	364.55
8......	364.25	366.27	365.07	371.20	366.95	365.95	364.45	363.65	365.55	364.45	364.55	364.37
9......	364.10	367.03	365.17	371.45	366.90	365.95	364.45	363.70	365.00	364.45	364.53	364.25
10......	364.10	367.23	365.13	371.45	366.85	365.95	364.45	364.25	365.35	364.30	364.55	364.25
11......	363.87	366.65	365.13	371.55	366.85	365.85	364.45	364.20	365.35	364.45	364.47	364.20
12......	364.25	366.33	365.03	371.55	366.85	365.70	364.15	364.15	365.25	364.45	364.33	364.15
13......	364.25	366.03	364.87	371.45	367.10	365.60	364.40	364.15	365.30	364.45	364.20	364.15
14......	364.03	365.83	364.75	371.15	367.25	365.40	364.45	364.15	365.30	364.45	364.20	364.25
15......	364.03	365.47	365.25	371.00	367.45	365.45	364.45	363.80	365.30	364.55	364.53	364.25
16......	364.10	365.67	365.25	370.95	367.55	365.45	364.45	363.57	365.20	364.60	364.35	364.10
17......	364.05	365.35	364.95	370.75	367.55	365.20	364.35	363.95	365.15	364.60	364.15	363.95
18......	364.05	365.30	365.13	370.60	367.45	365.00	364.55	363.95	365.15	364.37	364.23	363.85
19......	364.15	365.15	365.25	370.30	367.15	364.85	364.70	363.85	365.15	364.50	364.25	363.85
20......	364.15	365.10	365.27	370.10	366.95	364.75	365.00	363.95	364.95	364.65	364.25	363.85
21......	364.07	365.05	365.43	369.90	366.85	364.50	364.70	364.10	365.05	364.65	364.25	363.85
22......	364.03	365.07	365.53	369.70	366.50	364.65	364.50	363.43	364.95	364.75	364.35	363.95
23......	364.00	365.47	365.55	369.40	366.15	364.65	364.35	363.90	364.85	364.75	364.30	363.95
24......	363.75	365.47	365.50	369.25	365.70	364.65	364.35	364.55	364.85	364.75	364.20	364.00
25......	363.57	365.45	365.27	369.10	365.90	364.60	364.25	364.55	364.75	364.40	364.23	364.00
26......	364.03	365.47	366.20	369.05	366.05	364.55	364.15	364.70	364.65	364.65	364.25	364.05
27......	364.07	365.45	367.70	369.05	366.05	364.60	364.35	364.85	364.45	364.50	364.27	363.95
28......	364.17	365.47	368.87	368.90	365.70	364.45	364.35	365.00	364.75	364.40	364.15	363.95
29......	364.33	......	369.30	368.75	365.45	364.95	364.25	365.30	364.75	364.45	364.00	363.95
30......	364.67	......	370.10	368.60	365.30	364.85	364.15	365.35	364.65	364.40	363.95	363.95
31......	365.15	......	370.60	......	365.40	......	364.15	365.40	......	364.40	......	364.05

Daily Elevation of Water-surface (B. C. Datum) of Seneca River above Dam at Baldwinsville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	374.14	375.64	375.06	377.81	376.51	375.66	374.31	373.01	374.88	374.41	374.61	374.54
2......	374.08	375.71	374.86	378.01	376.31	375.61	374.28	374.11	374.88	374.36	374.61	374.58
3......	374.06	375.64	374.76	378.06	375.98	375.61	374.18	374.01	375.08	374.36	374.64	374.56
4......	374.28	375.64	374.74	378.11	375.96	375.64	374.44	373.88	375.11	374.44	374.61	374.56
5......	374.31	375.64	374.76	378.24	376.01	375.68	374.48	373.81	375.21	374.34	374.61	374.58
6......	374.21	375.56	374.81	378.18	375.94	375.68	374.41	373.68	375.34	374.28	374.61	374.66
7......	373.96	375.48	374.84	378.16	375.56	375.74	374.36	373.51	375.34	374.14	374.61	374.61
8......	373.51	375.44	375.04	378.11	375.66	375.61	374.28	374.01	375.56	374.14	374.71	374.54
9......	373.08	375.14	375.11	378.26	376.16	375.48	374.11	374.14	375.41	374.11	374.66	374.48
10......	372.88	374.78	374.96	378.26	376.36	375.54	374.01	374.06	375.36	374.28	374.68	374.46
11......	373.11	374.86	374.86	378.34	376.31	375.56	373.96	373.91	375.26	374.41	374.61	374.41
12......	372.71	374.86	374.71	378.41	376.24	375.54	374.61	373.84	375.21	374.41	374.56	374.36
13......	372.26	374.81	374.84	378.24	376.41	375.41	374.54	373.64	375.26	374.36	374.56	374.36
14......	372.11	374.68	374.91	378.16	376.56	375.44	374.08	373.44	375.14	374.34	374.44	374.36
15......	371.61	374.88	375.01	378.01	376.56	375.28	373.81	373.46	375.11	374.28	374.46	374.18
16......	371.31	374.74	374.91	377.91	376.56	375.24	373.71	373.84	375.06	374.21	374.58	374.06
17......	371.26	374.64	374.94	377.84	376.76	375.01	373.66	373.94	375.06	374.26	374.48	374.06
18......	371.81	374.58	375.14	377.68	376.76	375.81	374.28	374.06	374.94	374.56	374.34	374.01
19......	371.51	374.71	375.36	377.76	376.58	374.68	374.84	374.06	374.88	374.56	374.31	373.98
20......	371.08	374.71	375.48	377.54	376.44	374.54	374.78	373.86	374.91	374.44	374.31	374.18
21......	370.71	374.66	375.51	377.44	376.06	374.58	374.56	373.66	374.86	374.41	374.41	374.24
22......	370.54	374.84	375.61	377.34	375.74	374.51	374.48	374.16	374.78	374.36	374.54	374.21
23......	370.34	374.86	375.64	377.16	375.54	374.36	374.31	374.51	374.74	374.26	374.44	374.11
24......	370.26	374.88	375.48	377.01	375.58	374.34	374.31	374.51	374.68	374.26	374.36	374.06
25......	370.34	374.86	375.38	376.96	375.61	374.34	374.28	374.54	374.66	374.38	374.41	374.16
26......	370.46	374.86	375.94	377.06	375.61	374.28	374.38	374.61	374.61	374.41	374.46	374.21
27......	371.46	374.86	376.54	376.98	375.66	374.28	374.31	374.76	374.68	374.38	374.41	374.26
28......	371.81	374.91	376.98	376.91	375.54	374.44	374.14	374.91	374.61	374.51	374.41	374.21
29......	372.56	......	377.34	376.86	375.38	374.54	374.01	375.04	374.54	374.56	374.48	374.06
30......	373.66	......	377.46	376.66	375.48	374.41	373.91	375.26	374.48	374.61	374.44	374.14
31......	374.96	......	377.54	......	375.58	......	373.71	375.01	......	374.61	......	374.16

Daily Elevation of Water-surface (B. C. Datum) of Seneca River at Foot of Jack's Reef, Memphis

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	374.42	376.12	375.62	380.32	378.22	376.42	374.82	374.22	375.42	374.72	374.92	374.72
2......	374.32	376.42	375.72	380.52	378.02	376.42	374.72	374.22	375.32	374.72	374.92	374.82
3......	374.32	376.62	375.72	380.72	377.82	376.42	374.62	374.62	375.52	374.62	374.92	374.72
4......	374.52	376.62	375.72	380.72	377.62	376.42	374.62	374.42	375.72	374.62	374.82	374.82
5......	374.62	376.52	375.62	380.72	377.42	376.52	374.72	374.22	375.72	374.72	374.82	374.82
6......	374.52	376.42	375.62	380.72	377.32	376.52	374.82	374.02	375.72	374.62	374.82	374.82
7......	374.42	376.02	375.52	380.62	377.22	376.52	374.82	373.92	375.82	374.52	374.82	374.92
8......	374.22	376.02	375.62	380.52	377.12	376.62	374.72	374.12	375.62	374.42	374.92	374.82
9......	374.00	376.02	375.62	380.62	377.32	376.62	374.62	374.32	375.42	374.42	374.92	374.72
10......	373.82	375.72	375.72	380.72	377.52	376.52	374.52	374.42	375.32	374.52	374.92	374.72
11......	373.62	375.72	375.82	380.82	377.52	376.42	374.42	374.32	375.22	374.62	374.82	374.62
12......	373.52	375.62	375.92	380.82	377.52	376.42	374.62	374.32	375.22	374.82	374.82	374.62
13......	373.22	375.62	375.82	380.72	377.62	376.32	374.72	374.22	375.32	374.72	374.82	374.62
14......	372.82	375.52	375.72	380.62	377.72	376.22	374.52	374.02	375.32	374.62	374.72	374.52
15......	372.52	375.52	375.62	380.42	377.82	376.02	374.32	373.92	375.22	374.72	374.82	374.42
16......	372.42	375.52	375.62	380.32	377.92	375.82	374.12	374.02	375.22	374.72	374.72	374.32
17......	372.32	375.42	375.72	380.22	378.02	375.52	374.02	374.22	375.22	374.72	374.62	374.32
18......	372.22	375.32	375.82	380.02	378.12	375.22	374.52	374.22	375.12	374.72	374.52	374.22
19......	372.42	375.32	376.02	379.92	378.02	375.02	375.12	374.32	375.12	374.82	374.42	374.22
20......	372.32	375.32	376.22	379.82	377.92	375.02	375.32	374.22	375.12	374.72	374.52	374.32
21......	372.12	375.22	376.42	379.62	377.62	374.92	374.02	374.22	375.02	374.62	374.62	374.42
22......	372.02	375.22	376.52	379.42	377.02	374.92	374.82	374.42	374.92	374.62	374.72	374.42
23......	372.02	375.12	376.42	379.22	376.22	374.92	374.62	374.62	374.82	374.52	374.72	374.32
24......	371.92	375.22	376.32	379.02	376.12	374.82	374.62	374.82	374.82	374.52	374.72	374.32
25......	372.12	375.42	376.52	378.82	376.52	374.72	374.62	374.92	374.82	374.62	374.62	374.22
26......	372.02	375.62	376.62	378.82	376.52	374.72	374.62	375.02	374.82	374.62	374.62	374.22
27......	372.02	375.62	377.52	378.92	374.32	374.62	374.62	375.22	374.82	374.62	374.72	374.22
28......	372.52	375.72	378.72	378.82	376.22	374.62	374.52	375.42	374.92	374.72	374.72	374.22
29......	373.02	......	379.42	378.62	376.02	374.92	374.52	375.62	374.82	374.82	374.72	374.32
30......	374.22	......	380.02	378.52	376.12	374.92	374.42	375.72	374.82	374.82	374.72	374.42
31......	375.52	......	380.22	......	376.32	......	374.32	375.52	......	374.92	......	374.42

Daily Elevation of Water-surface (B. C. Datum) of Seneca River at Cross Lake, Jordan

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	374.69	376.54	375.89	381.14	378.44	376.49	374.69	374.29	375.44	374.74	374.89	374.69
2......	374.59	376.79	375.94	381.44	378.24	376.44	374.69	374.29	375.39	374.69	374.89	374.79
3......	374.59	376.89	375.84	381.59	378.04	376.49	374.69	374.39	375.69	374.69	374.89	374.79
4......	374.74	376.89	375.79	381.59	377.89	376.49	374.69	374.29	375.79	374.69	374.89	374.79
5......	374.84	376.79	375.89	381.59	377.74	376.59	374.69	374.14	375.69	374.59	374.89	374.89
6......	374.64	376.64	375.89	381.44	377.59	376.59	374.69	374.09	375.69	374.59	374.89	374.89
7......	374.44	376.49	375.89	381.29	377.49	376.69	374.64	373.94	375.69	374.49	374.89	374.89
8......	374.04	376.19	375.99	381.29	377.39	376.69	374.54	373.74	375.59	374.39	374.89	374.79
9......	373.64	376.19	376.09	381.39	377.54	376.59	374.44	374.14	375.39	374.39	374.89	374.69
10......	372.74	375.84	375.99	381.49	377.69	376.54	374.39	374.39	375.29	374.49	374.89	374.69
11......	372.84	375.79	375.89	381.54	377.69	376.44	374.29	374.29	375.29	374.64	374.89	374.59
12......	372.79	375.89	375.89	381.59	377.69	376.29	374.29	374.09	375.29	374.79	374.79	374.49
13......	372.69	375.79	375.89	381.34	377.84	376.19	374.29	373.89	375.34	374.69	374.69	374.49
14......	372.54	375.69	375.89	381.04	377.99	376.09	374.29	373.69	375.39	374.69	374.64	374.49
15......	372.29	375.59	375.89	380.79	378.14	375.94	374.24	373.94	375.29	374.69	374.69	374.39
16......	372.29	375.69	375.89	380.69	378.29	375.64	374.14	374.09	375.19	375.69	374.69	374.29
17......	372.29	375.54	375.89	380.64	378.39	375.44	374.09	374.19	375.19	374.69	374.59	374.29
18......	372.19	375.49	376.14	380.54	378.39	375.14	374.54	374.19	375.19	374.69	374.59	374.29
19......	372.09	375.49	376.44	380.34	378.29	374.89	375.14	374.29	375.19	374.79	374.49	374.29
20......	371.89	375.49	376.59	380.24	377.99	374.79	375.24	374.19	375.09	374.69	374.59	374.34
21......	371.74	375.49	376.59	380.04	377.44	374.79	375.04	374.29	375.04	374.69	374.59	374.39
22......	371.19	375.54	376.69	380.84	377.74	374.84	374.79	374.39	374.89	374.69	374.69	374.39
23......	371.29	375.79	376.69	380.64	376.34	374.74	374.69	374.64	374.79	374.59	374.59	374.29
24......	371.29	375.89	376.59	379.39	376.34	374.69	374.69	374.89	374.79	374.49	374.59	374.29
25......	371.64	375.89	376.54	379.19	376.59	374.59	374.69	374.99	374.79	374.54	374.64	374.29
26......	371.94	375.89	377.19	379.24	376.59	374.59	374.69	375.09	374.89	374.69	374.69	374.29
27......	372.24	375.89	378.59	379.24	376.49	374.59	374.64	375.29	374.89	374.59	374.69	374.39
28......	372.54	375.89	379.39	379.09	376.24	374.64	374.59	375.49	374.99	374.69	374.69	374.39
29......	373.19	......	380.09	378.94	375.99	374.89	374.49	375.59	374.89	374.79	374.69	374.29
30......	372.59	......	380.54	378.74	376.09	374.79	374.34	375.69	374.79	374.89	374.69	374.29
31......	371.39	......	380.89	......	376.24	......	374.19	375.59	......	374.89	......	374.39

Daily Elevation of Water-surface (B. C. Datum) of Seneca River at Mosquito Point Bridge, Port Byron

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	374.75	376.95	376.35	382.65	379.85	377.25	375.05	374.45	375.65	374.95	375.15	374.95
2.....	374.75	377.35	376.25	383.05	379.45	377.25	374.85	374.45	375.55	374.85	375.15	374.95
3.....	374.75	377.45	376.25	383.25	379.25	377.25	374.85	374.55	375.95	374.75	375.05	375.05
4.....	374.85	377.35	376.25	383.35	379.05	377.35	374.75	374.55	376.15	374.75	375.05	375.05
5.....	374.85	377.25	376.25	383.35	378.85	377.35	374.85	374.45	376.05	374.75	375.05	375.05
6.....	374.75	377.15	376.35	383.25	378.75	377.35	374.95	374.35	375.95	374.75	375.05	375.05
7.....	374.45	376.95	376.35	383.05	378.65	377.35	374.95	374.15	376.05	374.65	375.15	375.05
8.....	374.05	376.75	376.35	383.05	378.55	377.45	374.85	374.35	375.95	374.65	375.15	374.95
9.....	373.75	376.55	376.35	383.15	378.65	377.45	374.75	374.55	375.75	374.55	375.05	374.95
10.....	373.55	376.35	376.35	383.25	378.85	377.25	374.65	374.55	375.65	374.75	375.05	374.85
11.....	373.35	376.25	376.25	383.35	378.85	377.05	374.55	374.45	375.55	374.75	375.05	374.75
12.....	373.15	376.25	376.25	383.35	378.65	377.05	374.55	374.35	375.45	374.95	374.95	374.75
13.....	372.95	376.15	376.25	383.25	378.95	376.85	374.65	374.15	375.55	374.95	374.85	374.65
14.....	372.85	376.05	376.25	383.05	379.25	376.55	374.65	374.05	375.55	374.95	374.85	374.65
15.....	372.65	375.85	376.15	382.85	379.55	376.55	374.55	374.05	375.45	374.85	374.85	374.55
16.....	372.45	375.75	376.15	382.65	379.55	376.25	374.25	374.15	375.55	374.85	374.85	374.55
17.....	372.15	375.75	376.15	382.55	379.65	375.75	374.15	374.35	375.45	374.85	374.85	374.45
18.....	372.05	375.65	376.35	382.25	379.65	375.55	374.85	374.45	375.45	374.95	374.75	374.45
19.....	371.95	375.65	376.55	382.05	379.55	375.35	375.45	374.45	375.45	374.95	374.75	374.45
20.....	371.85	375.65	376.95	381.95	379.15	375.25	375.55	374.45	375.35	374.85	374.75	374.45
21.....	371.75	375.65	377.05	381.75	378.25	375.05	375.25	374.25	375.25	374.75	374.75	374.45
22.....	371.55	375.75	377.05	381.55	377.55	375.25	375.05	374.35	375.15	374.75	374.75	374.45
23.....	371.35	375.95	377.05	381.25	377.15	375.15	374.95	374.75	375.05	374.65	374.85	374.45
24.....	371.15	376.15	376.95	380.95	377.15	375.05	374.95	375.25	375.05	374.65	374.85	374.45
25.....	371.35	376.25	376.85	380.65	377.35	374.95	374.85	375.35	375.05	374.65	374.75	374.45
26.....	372.05	376.25	377.55	380.75	377.45	374.85	374.85	375.45	375.05	374.75	374.75	374.45
27.....	372.65	376.25	379.35	380.75	377.25	374.75	374.95	375.65	375.05	374.75	374.75	374.55
28.....	372.85	376.35	380.35	380.55	376.95	374.85	374.85	375.85	375.15	374.85	374.75	374.55
29.....	373.35	......	381.35	380.35	376.65	375.25	374.75	375.85	375.15	374.95	374.85	374.55
30.....	374.65	......	381.85	380.15	376.65	375.45	374.55	376.05	375.05	375.05	374.85	374.55
31.....	376.15	......	382.45	......	376.95	......	374.45	375.95	......	375.15	......	374.55

Daily Elevation of Water-surface (B. C. Datum) of Seneca River at N. Y. C. R. R. Bridge, near Fox Ridge, Savannah P. O.

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	377.65	380.02	379.18	384.40	382.15	380.75	378.00	377.70	378.65	378.12	378.05	377.75
2.....	377.65	380.32	379.40	384.50	381.98	380.58	378.00	377.70	378.65	377.85	378.00	377.75
3.....	377.60	380.15	379.48	384.60	381.88	380.52	378.00	377.70	378.92	377.85	378.00	377.75
4.....	377.60	380.00	379.35	384.60	381.62	380.62	377.95	377.70	378.92	377.85	378.00	377.80
5.....	377.60	380.05	379.20	384.60	381.50	380.68	277.95	377.70	378.85	377.85	378.00	377.85
6.....	377.48	379.80	379.20	384.48	381.35	380.60	377.90	377.70	378.68	377.85	378.00	377.78
7.....	376.95	379.55	378.92	384.38	381.50	380.60	377.90	377.70	378.65	377.85	378.00	377.70
8.....	376.78	379.25	378.90	384.35	381.68	380.62	377.90	377.70	378.65	377.90	378.00	377.70
9.....	376.70	379.60	378.82	384.55	381.75	380.60	377.90	377.70	378.65	377.95	377.95	377.65
10.....	377.00	380.05	378.78	384.72	381.72	380.30	377.90	377.70	378.60	378.00	377.90	377.60
11.....	376.92	380.38	378.70	384.78	381.68	380.35	377.90	377.70	378.55	378.00	377.85	377.60
12.....	377.08	379.85	378.65	384.70	381.65	380.15	377.90	377.70	378.50	378.00	377.78	377.52
13.....	377.40	379.22	378.60	384.38	381.88	379.92	377.90	377.65	378.55	378.00	377.70	377.50
14.....	377.45	379.00	378.60	384.20	382.15	379.65	377.90	377.65	378.55	378.00	377.70	377.55
15.....	377.32	378.80	378.55	383.98	382.32	379.45	377.85	377.65	378.55	378.00	377.70	377.55
16.....	376.90	378.68	378.42	383.88	382.40	378.90	377.85	377.65	378.60	378.00	377.70	377.50
17.....	376.85	378.62	378.55	383.78	382.35	378.45	377.88	377.65	378.58	378.00	377.70	377.50
18.....	376.85	378.50	379.08	383.65	382.28	378.25	378.00	377.65	378.50	378.00	377.62	377.42
19.....	376.85	378.48	379.52	383.48	382.05	378.00	378.10	377.65	378.38	378.00	377.70	377.40
20.....	376.85	378.40	379.60	383.40	381.25	378.00	378.20	377.65	378.22	378.00	377.75	377.40
21.....	376.85	378.38	379.35	383.22	380.30	378.00	377.90	377.65	378.20	378.00	377.75	377.40
22.....	376.85	379.10	379.90	383.10	379.65	378.00	377.85	377.65	378.20	377.95	377.75	377.60
23.....	376.85	379.40	379.95	382.88	380.00	378.00	377.85	377.90	378.15	377.90	377.75	377.60
24.....	377.00	379.40	379.88	382.78	380.48	378.00	377.85	378.25	378.15	377.90	377.75	377.40
25.....	377.45	379.40	379.90	382.65	380.65	378.00	377.85	378.55	378.25	377.90	377.75	377.35
26.....	377.60	379.40	380.60	382.70	380.42	378.00	377.85	378.85	378.25	377.90	377.80	377.35
27.....	377.70	379.30	381.95	382.70	380.05	378.00	377.85	379.25	378.20	378.00	377.80	377.35
28.....	377.78	379.25	382.50	382.62	379.40	377.90	377.85	379.40	378.20	378.10	377.80	377.30
29.....	377.88	......	382.65	382.50	379.55	377.90	377.85	379.25	378.15	378.10	377.80	377.35
30.....	379.05	......	384.35	382.30	380.20	377.90	377.80	378.80	378.15	378.10	377.75	377.35
31.....	379.60	......	384.40	......	380.50	......	377.75	378.72	......	378.10	......	377.40

CAYUGA LAKE

Daily Elevation of Water-surface (B. C. Datum) of Seneca River at foot of Cayuga Lake, Mud Lock

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	381.57	382.87	*a*	385.87	384.42	......	......	......	......	......	......	......
2	381.67	382.97	*a*	385.87	384.47	......	......	......	......	......	......	......
3	381.42	382.92	382.12	385.94	*a*	......	......	......	......	......	......	......
4	*a*	382.97	382.12	*a*	384.27	......	......	......	......	......	......	......
5	381.47	382.97	381.87	*a*	384.02	......	......	......	......	......	......	......
6	381.72	382.92	381.82	385.92	384.32	......	......	......	......	......	......	......
7	381.67	383.00	*a*	385.72	*a*	......	......	......	......	......	......	......
8	381.74	*a*	*a*	*a*	384.22	......	......	......	......	......	......	......
9	381.74	382.92	381.72	386.27	384.07	......	......	......	......	......	......	......
10	381.72	382.92	381.52	386.27	*a*	......	......	......	......	......	......	......
11	*a*	382.92	381.42	386.42	384.12	......	......	......	......	......	......	......
12	381.62	*a*	381.42	*a*	*a*	......	......	......	......	......	......	......
13	*a*	382.82	381.32	385.92	384.52	......	......	......	......	......	......	......
14	381.82	*a*	381.32	385.82	*a*	......	......	......	......	......	......	......
15	*a*	*a*	*a*	385.72	384.72	......	......	......	......	......	......	......
16	381.82	382.82	381.22	385.72	......	......	......	......	......	......	......	......
17	381.92	*a*	381.32	385.77	......	......	......	......	......	......	......	......
18	*a*	382.72	381.32	386.02	......	......	......	......	......	......	......	......
19	381.92	382.72	381.52	*a*	......	......	......	......	......	......	......	......
20	381.92	382.62	381.52	385.42	......	......	......	......	......	......	......	......
21	381.92	*a*	381.62	385.32	......	......	......	......	......	......	......	......
22	381.92	*a*	*a*	385.22	......	......	......	......	......	......	......	......
23	382.12	*a*	381.62	*a*	......	......	......	......	......	......	......	......
24	382.17	382.42	381.67	385.12	......	......	......	......	......	......	......	......
25	381.92	382.32	381.82	*a*	......	......	......	......	......	......	......	......
26	381.94	382.32	382.17	*a*	......	......	......	......	......	......	......	......
27	381.97	382.22	383.07	384.97	......	......	......	......	......	......	......	......
28	381.92	382.12	383.72	384.92	......	......	......	......	......	......	......	......
29	382.20	......	*a*	*a*	......	......	......	......	......	......	......	......
30	382.42	......	385.17	384.62	......	......	......	......	......	......	......	......
31	382.52	......	385.52	......	......	......	......	......	......	......	......	......

a No record. Gage at Mud lock discontinued, noon of May 15 and station reëstablished a Cayuga village, two miles up the lake.

Daily Elevation of Water-surface (B. C. Datum) of Cayuga Lake at Cayuga

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	......	384.45	383.90	383.80	384.15	382.95	382.05	381.20
2	......	......	......	......	......	384.35	383.90	383.80	384.25	382.95	381.95	381.20
3	......	......	......	......	......	384.30	383.90	383.80	384.30	382.95	381.95	381.10
4	......	......	......	......	......	384.25	383.90	383.80	384.25	383.00	381.85	381.10
5	......	......	......	......	......	384.15	383.95	383.80	384.25	382.90	381.75	381.10
6	......	......	......	......	......	384.10	383.90	383.90	384.30	382.85	381.70	381.10
7	......	......	......	......	......	384.05	383.95	383.75	384.15	382.90	381.90	381.05
8	......	......	......	......	......	384.15	383.90	383.70	384.20	382.85	381.75	381.10
9	......	......	......	......	......	383.95	383.90	383.75	384.05	382.85	381.65	381.10
10	......	......	......	......	......	383.90	383.95	383.70	383.95	382.80	381.70	381.15
11	......	......	......	......	......	383.70	383.90	383.70	383.95	382.75	381.70	381.10
12	......	......	......	......	......	383.65	383.85	383.70	383.90	382.70	381.60	381.10
13	......	......	......	......	......	383.60	383.85	383.70	383.90	382.65	381.65	381.40
14	......	......	......	......	......	383.65	383.90	383.70	383.85	382.65	381.55	381.10
15	......	......	......	......	384.60	383.65	383.90	383.70	383.75	382.75	381.65	381.15
16	......	......	......	......	384.55	383.50	383.85	383.70	383.70	382.60	381.60	381.15
17	......	......	......	......	384.65	383.60	384.00	383.75	383.60	382.60	381.55	381.10
18	......	......	......	......	384.55	383.70	383.95	383.85	383.50	382.55	381.55	381.10
19	......	......	......	......	384.55	383.65	383.85	383.85	383.55	382.50	381.75	381.15
20	......	......	......	......	384.65	383.70	383.95	383.90	383.50	382.55	381.40	381.00
21	......	......	......	......	384.70	383.65	383.95	384.05	383.50	382.50	381.50	381.05
22	......	......	......	......	384.85	383.80	383.90	384.25	383.50	382.45	381.50	380.95
23	......	......	......	......	384.75	383.75	383.95	384.30	383.35	382.45	381.30	380.95
24	......	......	......	......	384.70	383.80	383.90	384.25	383.35	382.35	381.50	380.90
25	......	......	......	......	384.75	383.75	383.85	384.30	383.30	382.35	381.35	380.85
26	......	......	......	......	384.65	383.75	383.85	384.25	383.25	382.35	381.35	380.85
27	......	......	......	......	384.65	383.70	383.85	384.15	383.00	382.10	381.20	380.90
28	......	......	......	......	384.80	383.90	383.75	384.15	383.15	382.25	381.20	380.80
29	......	......	......	......	384.80	383.90	383.75	384.20	383.15	382.20	381.30	380.85
30	......	......	......	......	384.70	383.80	383.80	384.10	382.95	382.05	381.30	380.80
31	......	......	......	......	384.60	......	383.80	384.15	......	382.05	......	380.80

Daily Elevation of Water-surface (B. C. Datum) of Cayuga Lake near Cornell Boat-house, Ithaca

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Aug.	Oct.	Nov.	Dec.
1	......	......	......	......	......	384.69	384.04	383.96	384.23	383.25	382.10	381.35
2	......	......	......	......	......	384.67	384.07	*a*	384.25	383.23	382.05	381.35
3	......	......	......	......	......	384.52	*a*	*a*	384.44	383.13	382.03	381.35
4	......	......	......	......	......	384.52	*a*	*a*	384.43	383.05	382.00	381.35
5	......	......	......	......	......	384.52	*a*	*a*	384.36	383.05	381.97	381.30
6	......	......	......	......	......	384.33	384.10	*a*	*a*	383.05	381.95	381.35
7	......	......	......	......	......	384.23	384.07	*a*	*a*	383.00	381.90	381.30
8	......	......	......	......	......	*a*	384.02	*a*	*a*	382.95	381.93	381.30
9	......	......	......	......	......	384.15	384.00	*a*	*a*	382.95	381.90	381.30
10	......	......	......	......	......	384.11	384.05	383.91	*a*	382.90	381.91	381.30
11	......	......	......	......	......	384.08	383.98	383.88	*a*	382.90	381.85	381.25
12	......	......	......	......	......	384.07	384.04	383.95	*a*	382.90	381.85	381.20
13	......	......	......	......	......	384.02	384.01	383.84	*a*	382.92	381.55	381.25
14	......	......	......	......	......	383.97	383.95	383.83	*a*	382.80	380.90	381.25
15	......	......	......	......	......	383.93	383.99	383.86	*a*	382.65	381.50	381.25
16	......	......	......	......	......	384.03	*a*	*a*	*a*	382.65	381.53	381.25
17	......	......	......	......	......	383.87	384.10	383.89	*a*	382.70	381.54	381.20
18	......	......	......	......	......	383.79	*a*	383.91	*a*	382.70	381.54	381.20
19	......	......	......	......	......	383.91	*a*	384.03	*a*	382.65	381.55	381.20
20	......	......	......	......	......	383.97	384.11	384.02	*a*	382.60	381.55	*a*
21	......	......	......	......	......	383.95	384.12	384.30	*a*	382.60	381.55	*a*
22	......	......	......	......	384.88	383.94	384.13	384.41	383.65	382.60	381.45	*a*
23	......	......	......	......	384.93	383.93	384.01	384.39	383.70	382.55	381.45	*a*
24	......	......	......	......	384.85	384.03	384.15	384.41	383.65	382.55	381.45	*a*
25	......	......	......	......	384.75	383.99	*a*	384.44	383.60	382.50	381.35	*a*
26	......	......	......	......	384.77	383.98	*a*	384.43	383.55	382.45	381.40	*a*
27	......	......	......	......	384.85	383.93	384.13	384.33	383.45	382.40	381.40	*a*
28	......	......	......	......	384.92	383.90	384.15	384.19	383.35	382.35	381.45	*a*
29	......	......	......	......	384.82	384.08	384.10	384.21	383.25	382.25	381.45	*a*
30	......	......	......	......	384.85	384.15	383.97	384.32	383.27	382.20	381.35	*a*
31	......	......	......	......	384.77	......	383.96	384.21	......	382.10	......	*a*

a No record. Gage in Cayuga inlet, Ithaca terminal.

SENECA RIVER, SENECA FALLS TO GENEVA

Daily Elevation of Water-surface (B. C. Datum) of Seneca River below Lock No. 6 at Seneca Falls

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	*a*	*a*	*a*	392.52	392.18	392.52	392.10	392.20	392.22	392.05	*a*	......
2	391.84	391.98	391.96	392.66	392.20	392.48	392.12	*a*	392.15	392.10	392.10	......
3	392.04	392.04	392.02	392.62	*a*	392.52	392.07	392.31	392.21	391.92	*a*	......
4	*a*	392.03	391.98	392.60	392.19	392.47	*a*	392.19	392.17	*a*	*a*	......
5	392.04	392.04	392.00	*a*	392.43	392.48	*a*	392.19	392.10	392.12	392.13	......
6	392.04	392.02	392.02	392.58	392.60	392.48	392.13	392.30	*a*	392.24	392.18	......
7	392.03	392.02	392.01	392.58	392.65	*a*	392.10	392.24	392.10	392.10	*a*	......
8	392.02	*a*	*a*	392.82	392.62	392.48	392.10	392.22	392.10	392.10	*a*	......
9	392.06	392.47	392.02	392.63	*a*	392.47	392.03	*a*	392.10	392.10	392.20	......
10	392.05	392.32	*a*	392.62	*a*	392.48	392.05	392 24	392.09	392.05	392.14	......
11	391.92	392.20	*a*	392.60	392.55	392.47	392.07	392.17	392.17	*a*	392.13	......
12	392.02	392.24	392.06	*a*	392.58	392.45	*a*	392.16	392.10	392.07	*a*	......
13	392.06	392.27	*a*	392.61	392.76	392.43	392.22	392.18	392.14	392.02	392.06	......
14	392.08	392.20	*a*	392.62	392.68	*a*	392.26	392.18	392.12	392.05	*a*	......
15	392.08	*a*	*a*	392.66	392.70	392.36	392.24	392.20	392.15	391.10	*a*	......
16	392.06	392.19	392.07	392.70	392.72	392.34	392.23	*a*	392.12	392.07	*a*	......
17	392.02	392.22	392.09	392.66	*a*	392.32	392.28	392.18	392.10	392.05	392.26	......
18	*a*	392.09	392.08	392.65	392.73	392.31	392.24	392.18	392.10	*a*	*a*	......
19	392.02	392.04	392.05	*a*	392.70	392.31	*a*	392.20	392.15	*a*	*a*	......
20	391.93	392.05	391.97	392.58	392.65	392.31	392.22	392.20	*a*	392.02	*a*	......
21	392.04	391.99	391.95	392.62	392.65	*a*	392.18	392.36	392.08	392.02	*a*	......
22	392.02	*a*	*a*	392.62	392.64	392.27	392.10	*a*	392.07	391.99	*a*	......
23	391.98	392.01	391.92	392.61	392.64	392.28	392.17	*a*	392.09	392.05	*a*	......
24	392.01	392.07	391.91	392.62	*a*	392.30	392.23	392.28	392.08	391.99	*a*	......
25	*a*	392.02	392.28	392.61	392.59	392.19	392.18	392.24	392.10	*a*	*a*	......
26	391.92	392.04	392.74	*a*	392.56	392.18	*a*	392.24	392.08	392.05	*a*	......
27	391.97	392.03	392.42	392.60	392.56	392.18	392.10	392.25	*a*	392.05	*a*	......
28	392.08	391.98	392.58	392.62	392.62	*a*	392.33	*a*	391.99	392.15	*a*	......
29	392.19	......	*a*	392.60	392.54	392.17	392.22	392.22	392.08	*a*	*a*	......
30	392.08	......	392.64	392.20	*a*	392.06	392.21	*a*	392.10	392.13	*a*	......
31	392.07	......	392.54	......	*a*	......	392.22	392.22	......	392.05	......	......

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Seneca River above Seneca Falls

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	429.89	429.99	429.81	430.89	430.15	430.65	429.85	429.81	429.75	429.68	429.57	*b*
2.....	429.87	429.99	429.79	431.11	430.11	430.65	429.83	429.80	429.73	429.73	429.63	*b*
3.....	429.87	430.03	429.88	431.09	430.15	430.65	429.83	429.80	429.76	429.71	429.58	*b*
4.....	429.81	430.05	429.87	431.07	430.17	430.69	429.83	429.79	429.77	429.61	429.55	*b*
5.....	429.88	430.05	429.86	431.09	430.34	430.62	429.84	429.72	429.77	429.61	429.68	*b*
6.....	429.89	430.03	429.88	430.99	431.01	430.57	429.69	429.81	429.77	429.63	429.76	425.00
7.....	429.89	430.03	429.83	430.97	430.93	430.44	429.78	429.66	429.73	429.62	429.72	425.35
8.....	429.89	430.07	429.82	431.44	430.89	430.34	429.83	429.61	429.72	429.73	429.69	423.55
9.....	429.89	430.09	429.83	431.20	430.92	430.36	429.80	429.60	429.72	429.73	429.77	423.75
10.....	429.89	430.07	429.83	431.19	430.95	430.37	429.75	429.72	429.69	429.65	429.77	425.25
11.....	429.87	430.09	429.85	431.18	430.78	430.34	429.78	429.72	429.74	429.62	429.76	425.00
12.....	429.89	430.07	429.87	431.12	430.80	430.33	429.79	429.65	429.70	429.70	429.77	424.80
13.....	429.94	430.07	429.87	431.04	431.31	430.37	429.80	429.69	429.69	429.69	429.64	421.00
14.....	429.99	430.09	429.87	431.10	431.17	430.36	429.84	429.61	429.79	429.69	429.14	423.55
15.....	429.94	430.03	429.86	431.09	431.20	430.20	429.85	429.65	429.68	429.70	429.88	423.40
16.....	430.04	430.03	429.89	431.27	431.31	430.13	429.79	429.63	429.71	429.71	429.67	423.50
17.....	429.99	430.04	429.92	431.11	431.27	430.13	429.75	429.65	429.72	429.63	429.78	423.42
18.....	429.92	429.90	429.91	431.18	431.08	430.13	429.79	429.75	429.67	428.61	429.67	424.90
19.....	429.95	429.91	429.89	431.19	431.04	430.15	429.75	429.71	429.64	429.63	429.51	423.80
20.....	429.94	429.93	429.85	430.87	430.97	430.12	429.76	429.75	429.66	429.61	429.59	426.35
21.....	429.92	429.84	429.90	430.87	430.91	430.13	429.76	429.80	429.73	429.61	429.55	423.40
22.....	429.95	429.87	429.91	430.94	430.95	430.09	429.71	429.76	429.63	429.60	429.53	424.30
23.....	429.98	*a*	429.90	430.91	430.97	430.08	429.88	429.77	429.51	429.61	429.58	*a*
24.....	429.99	429.92	429.85	430.89	430.99	430.09	429.81	429.81	429.47	429.59	429.59	*a*
25.....	429.84	429.88	429.96	430.93	430.78	429.99	429.82	429.73	429.73	429.51	429.59	*a*
26.....	429.98	429.86	430.72	431.12	430.77	430.03	429.87	429.77	429.67	429.47	429.54	*a*
27.....	429.99	429.85	430.45	430.93	430.80	430.01	429.81	429.74	429.70	429.58	428.34	*a*
28.....	430.01	429.81	431.15	430.89	430.79	429.97	429.74	429.77	429.47	429.67	427.09	*a*
29.....	430.07	......	430.90	430.85	430.78	429.93	429.79	429.77	429.69	429.55	*b*	*a*
30.....	430.07	......	430.99	430.20	430.85	429.86	429.81	429.85	429.67	429.67	*b*	*a*
31.....	430.03	......	430.94	......	430.81	......	429.81	429.71	......	429.52	......	427.30

a No record. *b* Water drawn below gage; new gage established December 6.

Daily Elevation of Water-surface (B. C. Datum) of Seneca River below Guard-lock near Geneva

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	445.63	446.18	445.93	447.33	446.68	447.08	446.68	446.23	......	......	......	......
2.....	445.73	446.23	445.88	447.28	446.68	447.03	446.73	446.23	......	......	......	......
3.....	445.68	446.23	445.98	447.23	446.73	447.03	446.63	446.18	......	......	......	......
4.....	445.63	446.28	445.98	447.13	446.73	447.03	446.63	446.13	......	......	......	......
5.....	445.63	446.23	445.98	447.13	446.93	447.03	446.63	446.23	......	......	......	......
6.....	445.63	446.23	445.98	447.18	447.33	447.08	446.63	446.23	......	......	......	......
7.....	445.68	446.28	445.98	447.18	447.38	447.13	446.63	446.23	......	......	......	......
8.....	445.68	446.33	446.03	447.38	447.33	447.03	446.63	*	......	......	......	......
9.....	445.63	446.23	446.03	447.53	447.23	447.03	446.63	......	......	......	......	......
10.....	445.63	446.13	445.98	447.58	447.33	447.03	446.58	......	......	......	......	......
11.....	445.68	446.13	445.93	447.48	447.23	447.03	446.53	......	......	......	......	......
12.....	445.68	446.13	445.93	447.38	447.23	446.93	446.53	......	......	......	......	......
13.....	445.48	446.13	*a*	447.33	447.68	446.83	446.53	......	......	......	......	......
14.....	445.48	446.13	*a*	447.33	447.63	446.88	446.53	......	......	......	......	......
15.....	445.53	446.23	*a*	447.38	447.58	446.83	446.53	......	......	......	......	......
16.....	445.53	446.13	*a*	447.58	447.53	446.83	446.53	......	......	......	......	......
17.....	445.53	446.13	446.03	447.43	447.53	446.83	446.58	......	......	......	......	......
18.....	445.53	446.18	446.13	447.48	447.43	446.83	446.53	......	......	......	......	......
19.....	445.53	446.08	446.18	447.38	447.43	446.83	446.48	......	......	......	......	......
20.....	445.48	446.03	446.18	447.38	447.43	446.78	446.43	......	......	......	......	......
21.....	445.48	446.13	446.13	447.38	447.43	446.73	446.43	......	......	......	......	......
22.....	445.43	446.08	446.13	447.33	447.33	446.78	446.38	......	......	......	......	......
23.....	445.53	446.08	446.13	447.33	447.33	446.78	446.43	......	......	......	......	......
24.....	445.53	446.08	446.23	447.33	447.28	446.73	446.38	......	......	......	......	......
25.....	445.58	446.08	446.28	447.33	447.28	446.73	446.38	......	......	......	......	......
26.....	445.53	446.03	446.63	447.48	447.23	446.68	446.33	......	......	......	......	......
27.....	445.53	446.03	446.88	447.33	447.23	446.63	446.28	......	......	......	......	......
28.....	445.53	446.03	447.28	447.23	447.23	446.63	446.28	......	......	......	......	......
29.....	445.68	......	447.18	447.48	447.18	446.68	446.28	......	......	......	......	......
30.....	445.83	......	447.33	446.33	447.13	446.73	446.28	......	......	......	......	......
31.....	445.88	......	447.28	......	447.13	......	446.23	......	......	......	......	......

* Station discontinued. *a* No record.

SENECA RIVER AT SENECA LAKE

Daily Elevation of Water-surface (B. C. Datum) of Seneca River above Guard-lock near Geneva

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	445.73	446.28	446.03	447.88	448.23	447.58	447.03	446.53	446.73	446.38	446.13	445.78
2.....	445.83	446.33	445.98	447.98	448.23	447.53	447.03	446.53	446.83	446.38	446.08	445.83
3.....	445.78	446.33	446.03	448.03	448.23	447.53	446.93	446.48	446.73	446.38	446.08	445.83
4.....	445.73	446.33	446.08	448.03	448.23	447.48	446.93	446.48	446.88	446.38	446.13	445.78
5.....	445.73	446.33	446.08	448.03	448.08	447.53	446.93	446.53	446.83	446.38	446.08	445.73
6.....	445.73	446.33	446.08	448.03	448.08	447.48	446.93	446.53	446.83	446.28	445.98	445.78
7.....	445.78	446.33	446.18	447.98	447.98	447.53	446.93	446.48	446.78	446.28	446.03	445.83
8.....	445.78	446.43	446.23	448.28	448.03	447.48	446.93	446.53	446.68	446.23	446.03	445.83
9.....	445.73	446.33	446.23	448.48	448.03	447.53	446.93	446.48	446.68	446.33	445.98	445.83
10.....	445.73	446.23	446.13	448.38	448.03	447.48	446.93	446.48	446.63	446.33	445.93	445.83
11.....	445.78	446.23	446.13	448.33	447.78	447.43	446.83	446.38	446.63	446.33	445.98	445.83
12.....	445.78	446.23	446.13	448.33	447.78	447.33	446.83	446.43	446.63	446.28	445.93	445.83
13.....	445.58	446.23	446.18	448.23	448.28	447.33	446.83	446.43	446.63	446.28	445.98	445.83
14.....	445.58	446.23	446.18	448.13	448.23	447.28	446.83	446.33	446.63	446.28	445.88	445.93
15.....	445.63	446.33	445.98	448.13	448.23	447.23	446.83	446.33	446.63	446.28	445.93	445.93
16.....	445.63	446.23	446.13	448.38	448.23	447.23	446.83	446.43	446.58	446.28	445.88	445.88
17.....	445.63	446.23	446.23	448.33	448.23	447.18	446.88	446.38	446.53	446.23	445.93	445.83
18.....	445.63	446.28	446.38	448.33	448.13	447.23	446.78	446.43	446.53	446.28	445.88	445.88
19.....	445.58	446.23	446.43	448.23	448.08	447.23	446.73	446.53	446.53	446.28	445.88	445.88
20.....	445.53	446.23	446.43	448.23	448.03	447.13	446.73	446.53	446.53	446.28	445.93	445.93
21.....	445.53	446.23	446.43	448.23	447.98	447.13	446.73	446.78	446.53	446.28	445.83	445.88
22.....	445.53	446.18	446.43	448.13	447.93	447.18	446.68	446.73	446.53	446.23	445.88	445.88
23.....	445.63	446.18	446.43	448.13	447.93	447.13	446.73	446.78	446.48	446.23	445.83	445.88
24.....	445.53	446.13	446.48	448.13	447.83	447.13	446.63	446.78	446.43	446.23	445.83	445.88
25.....	445.58	446.18	446.63	448.08	447.83	447.13	446.68	446.83	446.53	446.14	445.83	445.88
26.....	445.58	446.13	446.93	448.18	447.83	446.98	446.63	446.73	446.43	446.23	445.83	445.83
27.....	445.63	446.13	447.18	448.13	447.83	446.98	446.58	446.73	446.43	446.13	445.78	445.83
28.....	445.58	446.13	447.58	448.03	447.73	447.03	446.58	446.78	446.48	446.13	445.78	445.78
29.....	445.78	......	447.63	448.18	447.73	447.08	446.58	446.83	446.43	446.13	445.73	445.78
30.....	445.93	......	447.78	448.23	447.68	447.08	446.53	446.73	446.43	446.13	445.78	445.78
31.....	445.98	......	447.83	......	447.63	......	446.53	446.73	......	446.03	......	445.78

1,500 feet below outlet of Seneca lake and indicates lake surface very nearly.

SENECA RIVER DISCHARGE AT SENECA FALLS

The station was established on Seneca river below Seneca Falls, on November 16, 1909, by L. S. Hulburd for this Department.

The State weir used to calculate discharge at this point was obstructed during March, 1913, and a temporary spillway was constructed several hundred feet farther down the canal, in order to pass water around the site of the new Barge canal locks. This temporary spillway was discontinued in November, 1914.

The discharge of the Seneca river at this locality for 1913, as published in the report of the State Engineer and Surveyor for 1913, Vol. II, page 99, was computed for the months, April to December, by the use of a discharge curve applying to the old State weir instead of the temporary spillway and are incorrect as published during that period.

The unfavorable conditions at the State weir are described in the 1913 report. Conditions at the temporary spillway are even more unfavorable for weir measurements. Estimates of the discharge during the latter portion of 1913 and through 1914 have been made from water-surface elevations on the basis of theoretical discharge over the temporary spillway. These quantities are approximate only and are subject to revision in connection with the results of study of current-meter measurements not completed.

The publication now of these tentative values is simply for the convenience of any one desiring an approximate idea of the discharge. For 1914 elevations of water-surface, see table for below lock No. 6, page 145.

Daily Discharge, in Second-feet, of Seneca River at Seneca Falls

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	834	1,095	463	*a*	993	930	557	600	397	557	557	579
2.....	745	997	357	*a*	980	930	579	536	388	557	*a*	590
3.....	702	857	269	*a*	967	831	579	*a*	379	485	568	495
4.....	973	745	463	*a*	*a*	782	*a*	600	369	485	525	515
5.....	903	834	316	*a*	980	807	505	579	360	*a*	590	495
6.....	1,095	1,034	262	*a*	905	758	*a*	475	388	475	579	455
7.....	973	1,247	*a*	*a*	930	782	568	600	324	455	590	*a*
8.....	*a*	1,034	*a*	*a*	905	*a*	505	579	445	425	557	536
9.....	*a*	1,034	*a*	*a*	905	735	557	632	435	445	*a*	495
10.....	880	973	*a*	*a*	917	758	546	*a*	455	455	655	536
11.....	*a*	973	*a*	*a*	*a*	758	536	701	495	445	600	515
12.....	1,352	997	*a*	*a*	855	758	475	644	425	*a*	536	475
13.....	880	915	*a*	*a*	867	735	*a*	712	445	485	579	557
14.....	745	868	*a*	*a*	855	701	505	678	*a*	475	525	*a*
15.....	915	868	*a*	*a*	879	*a*	536	690	495	435	568	525
16.....	1,158	880	*a*	967	855	747	515	632	455	600	*a*	495
17.....	1,352	915	*a*	943	843	712	475	557	505	622	546	495
18.....	1,299	868	*a*	967	*a*	690	632	667	536	557	611	505
19.....	973	857	*a*	967	879	667	435	712	485	*a*	568	505
20.....	1,120	857	*a*	*a*	867	667	*a*	678	515	557	568	495
21.....	1,095	868	*a*	967	867	678	485	416	*a*	579	622	*a*
22.....	1,022	857	*a*	1,006	892	*a*	505	360	579	579	600	515
23.....	985	915	*a*	967	879	611	557	333	536	579	*a*	536
24.....	997	857	*a*	993	867	600	557	*a*	579	579	600	515
25.....	973	767	*a*	980	879	600	579	324	568	*a*	455	*a*
26.....	997	756	*a*	993	855	579	536	341	600	*a*	485	495
27.....	973	723	*a*	*a*	855	600	407	333	568	600	*a*	445
28.....	997	681	*a*	955	955	590	579	379	*a*	579	435	*a*
29.....	903	......	*a*	1,019	905	*a*	590	388	536	557	465	495
30.....	1,034	......	*a*	993	855	557	557	416	557	557	*a*	465
31.....	1,221	......	*a*	......	843	......	525	*a*	......	525	......	495
Mean...	1,003	903	......	978	894	714	533	539	475	525	558	509

a No record. Superseding record in 1913 report of State Engineer and Surveyor, Vol. II, page 99. Quantities subject to revision; are approximate only; see text above.

Daily Discharge, in Second-feet, of Seneca River at Seneca Falls

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	*a*	*a*	*a*	1,032	622	1,032	536	644	667	485	*a*	......
2......	290	416	397	1,221	644	980	557	*a*	590	536	536	......
3......	475	475	455	1,166	*a*	1,032	505	770	655	360	*a*	......
4......	*a*	465	416	1,138	632	967	*a*	632	611	*a*	*a*	......
5......	475	475	435	*a*	917	980	*a*	632	536	557	568	......
6......	475	455	455	1,112	1,138	980	568	758	*a*	690	622	......
7......	465	455	445	1,112	1,207	*a*	536	690	536	536	*a*	......
8......	455	*a*	*a*	1,450	1,166	980	536	667	536	536	*a*	......
9......	495	967	455	1,179	*a*	967	465	*a*	536	536	644	......
10......	485	782	*a*	1,166	*a*	980	485	690	525	485	579	......
11......	360	644	*a*	1,138	1,072	967	505	611	611	*a*	568	......
12......	455	690	495	*a*	1,112	943	*a*	600	536	505	*a*	......
13......	495	724	*a*	1,152	1,362	917	667	622	579	455	495	......
14......	515	644	*a*	1,166	1,248	*a*	712	622	557	485	*a*	......
15......	515	*a*	*a*	1,221	1,276	831	690	644	590	536	*a*	......
16......	495	632	505	1,276	1,305	807	678	*a*	557	505	*a*	......
17......	455	667	525	1,221	*a*	782	735	622	536	485	712	......
18......	*a*	525	515	1,207	1,319	770	690	622	536	*a*	*a*	......
19......	455	475	485	*a*	1,276	770	*a*	644	590	*a*	*a*	......
20......	369	485	407	1,112	1,207	770	667	644	*a*	455	*a*	......
21......	475	425	388	1,166	1,207	*a*	622	831	515	455	*a*	......
22......	455	*a*	*a*	1,166	1,193	724	536	*a*	505	425	*a*	......
23......	416	445	360	1,152	1,193	735	611	*a*	525	485	*a*	......
24......	445	505	351	1,166	*a*	758	678	735	515	425	*a*	......
25......	*a*	455	735	1,152	1,124	632	622	690	536	*a*	*a*	......
26......	360	475	1,334	*a*	1,085	622	*a*	690	515	485	*a*	......
27......	407	465	905	1,138	1,085	622	536	701	*a*	485	*a*	......
28......	515	416	1,112	1,166	1,166	*a*	795	*a*	425	590	*a*	......
29......	632	......	*a*	1,138	1,059	611	667	667	515	*a*	*a*	......
30......	515	......	1,193	644	*a*	495	655	*a*	536	568	*a*	......
31......	505	......	1,059	......	*a*	......	667	667	......	485	......	......
Mean...	461	548	610	1,162	1,109	866	612	671	551	502	......	......

a No record. Quantities subject to revision; are approximate only; see text above.

Monthly Discharge of Seneca River at Seneca Falls
[Drainage area, 780 square miles]

1913	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January..........................	1,352	702	1,003	1.29	1.49
February.........................	1,247	681	903	1.16	1.21
March............................	*a*	....	....	....	....
April *b*..........................	1,019	955	978	1.25	1.40
May..............................	993	843	894	1.15	1.33
June.............................	930	557	714	0.915	1.02
July.............................	632	407	533	0.683	0.787
August...........................	712	324	539	0.692	0.798
September........................	600	324	475	0.609	0.68
October..........................	622	425	525	0.673	0.776
November.........................	655	435	558	0.716	0.799
December.........................	590	445	509	0.653	0.753

a No record; spillway being changed. *b* Mean for month taken as that of last half. Superseding record in 1913 report of State Engineer and Surveyor, Vol. II, page 99. Quantities subject to revision; are approximate only; see text above.

Monthly Discharge of Seneca River at Seneca Falls
[Drainage area, 780 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	632	290	461	0.591	0.68
February	967	416	548	0.703	0.73
March	1,334	351	610	0.782	0.90
April	1,450	644	1,162	1.49	1.66
May	1,362	622	1,109	1.422	1.64
June	1,032	495	866	1.11	1.24
July	795	465	612	0.785	0.90
August	831	600	671	0.86	0.99
September	667	425	551	0.706	0.79
October	690	360	502	0.644	0.74

Quantities subject to revision; are approximate only; see text above.

ONONDAGA LAKE AND CREEK

Daily Elevation of Water-surface (B. C. Datum) of Onondaga Outlet near Long Branch, Liverpool P. O

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	364.40	364.40	364.30	370.00	366.90	364.70	364.10	363.50	364.80	364.10	364.70	364.10
2	364.40	364.40	364.30	370.60	366.80	364.60	364.00	363.50	364.80	364.10	364.70	364.10
3	364.40	364.40	364.30	370.80	366.70	364.60	364.00	363.50	364.90	364.10	364.70	364.10
4	364.30	364.30	364.20	370.80	366.60	364.50	364.00	363.50	364.90	364.10	364.60	364.10
5	364.30	364.30	364.20	*a*	366.60	364.50	364.00	363.50	364.80	364.10	364.60	364.00
6	364.30	364.30	364.20	370.50	366.50	364.40	363.90	363.40	364.80	364.20	364.60	364.00
7	364.30	364.30	364.20	370.30	366.50	364.40	363.90	363.40	364.70	364.20	364.60	364.00
8	364.20	364.30	364.20	370.30	366.50	364.30	363.90	363.40	364.70	364.20	364.50	364.00
9	364.20	364.20	364.20	370.70	366.40	364.30	363.90	363.40	364.70	364.20	364.50	363.90
10	364.20	364.20	364.20	370.70	366.40	364.20	363.90	363.40	364.60	364.10	364.40	363.90
11	364.20	364.20	364.20	370.60	366.30	364.20	363.80	363.40	364.60	364.10	364.40	363.90
12	364.20	364.20	364.30	*a*	366.30	364.10	363.80	363.40	364.60	364.10	364.40	363.90
13	364.10	364.10	364.30	370.50	366.20	364.10	363.80	363.40	364.60	364.10	364.40	363.80
14	364.10	364.10	364.30	370.30	366.20	364.00	363.80	363.40	364.60	364.10	364.30	363.80
15	364.10	364.10	364.30	370.20	366.20	364.00	363.80	363.40	364.50	364.00	364.30	363.80
16	364.10	364.10	364.30	370.00	366.10	364.00	363.80	363.50	364.50	364.00	364.20	363.80
17	364.10	264.10	364.30	370.00	366.00	363.90	364.20	363.50	364.50	364.00	364.20	363.90
18	364.10	364.10	364.30	*a*	366.00	363.90	364.20	363.50	364.50	364.00	364.10	363.90
19	364.10	364.10	364.40	*a*	365.90	363.90	364.20	363.60	364.50	364.00	364.10	363.90
20	364.10	364.20	364.40	369.30	365.80	363.80	364.10	363.60	364.40	363.90	364.10	364.00
21	364.20	364.20	364.40	369.20	365.70	363.80	364.00	363.70	364.40	363.90	364.00	364.00
22	364.20	364.20	364.50	369.00	365.60	363.80	363.90	363.80	364.40	363.90	364.00	364.10
23	364.30	364.20	364.60	368.80	365.50	363.80	363.90	363.80	364.30	363.90	364.00	364.10
24	364.30	364.20	364.80	*a*	365.40	363.80	363.80	363.90	364.30	363.90	364.00	364.10
25	364.30	364.20	365.30	368.50	365.30	363.80	363.80	363.90	364.30	363.90	364.00	364.10
26	364.30	364.20	366.40	*a*	365.20	363.80	363.70	364.00	364.30	363.80	364.00	364.20
27	364.30	364.30	367.50	368.50	365.10	363.90	363.70	364.10	364.20	363.80	364.10	364.20
28	364.40	364.30	368.50	368.50	365.00	364.00	363.60	364.20	364.20	363.80	364.10	364.20
29	364.40	......	369.20	368.30	364.90	364.10	363.60	364.30	364.20	363.80	364.10	364.20
30	364.40	......	369.40	*a*	364.80	364.10	363.60	364.60	364.10	363.80	364.10	364.20
31	364.40	......	369.50	......	364.70	......	363.50	364.80	......	363.80	......	364.20

a No record. Gives lake level very nearly.

Daily Elevation of Water-surface (B. C. Datum) of Onondaga Lake at Syracuse

1912	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	364.29	362.88	365.46	368.38	366.46	366.46	363.88	363.46	363.63	364.71	364.63	365.13
2.....	364.21	362.88	365.46	369.04	366.29	366.21	363.88	363.38	363.71	364.63	364.54	365.21
3.....	364.13	362.79	365.38	369.38	366.21	366.04	363.88	363.46	363.79	364.54	364.54	365.21
4.....	364.13	362.71	365.29	369.38	366.13	365.71	364.04	363.46	363.79	364.54	364.46	365.21
5.....	364.13	362.71	365.21	369.38	366.04	365.38	363.96	363.46	363.71	364.46	364.38	365.29
6.....	364.13	362.63	365.13	369.46	365.96	364.96	363.88	363.46	363.63	364.46	364.29	365.29
7.....	364.13	362.63	365.04	369.46	365.79	364.79	363.88	363.46	363.54	364.38	364.29	365.38
8.....	364.04	362.54	364.96	368.96	365.63	364.63	363.88	363.38	363.54	364.38	364.46	365.54
9.....	363.96	362.54	364.96	368.96	365.54	364.46	363.88	363.38	363.54	364.29	364.79	365.63
10.....	363.88	362.46	365.04	368.96	365.38	364.38	363.88	363.38	363.54	364.29	364.88	365.54
11.....	363.79	362.46	365.04	368.96	365.21	364.21	363.88	363.54	363.54	364.29	364.96	365.46
12.....	363.71	362.38	365.04	369.04	365.13	364.13	363.88	363.71	363.46	364.29	364.96	365.29
13.....	363.71	362.38	365.04	369.13	365.04	363.96	363.88	363.71	363.46	364.29	365.04	365.13
14.....	363.63	362.38	365.04	369.29	364.96	363.79	363.88	363.71	363.38	364.29	365.04	364.96
15.....	363.63	362.46	365.21	369.46	364.88	363.71	363.88	363.63	363.38	364.29	365.13	364.88
16.....	363.54	362.71	365.63	369.29	364.88	363.71	363.96	363.63	363.96	364.21	365.13	364.88
17.....	363.46	362.79	366.21	369.04	364.96	363.79	363.96	363.54	363.88	364.21	365.04	364.88
18.....	363.38	362.96	366.71	368.79	365.13	363.79	363.88	363.54	363.88	364.21	364.96	364.88
19.....	363.38	363.13	367.29	368.63	365.21	363.79	363.88	363.54	363.88	364.21	364.96	364.96
20.....	363.29	363.38	367.88	368.38	365.38	363.71	363.88	363.54	363.79	364.21	364.88	365.04
21.....	363.21	363.71	368.21	368.21	365.63	363.71	363.79	363.54	363.79	364.21	364.88	365.13
22.....	363.13	364.21	367.96	368.04	365.71	363.71	363.79	363.54	363.79	364.21	364.79	365.13
23.....	363.13	364.38	367.63	367.79	365.71	363.79	363.71	363.54	363.88	364.29	364.71	365.04
24.....	363.04	364.54	367.46	367.63	365.71	363.79	363.71	363.63	364.02	364.38	364.88	365.04
25.....	363.04	364.71	367.29	367.46	365.71	364.04	363.63	363.54	364.54	364.46	365.13	365.04
26.....	362.96	364.88	367.13	367.29	365.63	363.79	363.63	363.54	364.71	364.46	365.21	365.04
27.....	362.96	365.13	366.96	367.13	365.54	363.88	363.46	363.63	364.71	364.63	365.21	365.13
28.....	362.96	365.29	366.96	366.96	365.79	363.88	363.46	363.54	364.63	364.71	365.21	365.13
29.....	362.96	365.38	367.29	366.88	365.96	363.88	363.63	363.54	364.63	364.71	365.21	365.04
30.....	362.96	......	367.71	366.79	366.29	363.88	363.63	363.54	364.71	364.71	365.13	365.04
31.....	362.96	......	367.88	......	366.46	......	363.46	363.54	......	364.71	......	365.04

NOTE.— Supersedes table published in report of State Engineer and Surveyor for 1912, Vol. II page 79.

Daily Elevation of Water-surface (B. C. Datum) of Onondaga Lake at Syracuse

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	364.95	367.70	365.37	369.70	364.79	364.45	363.70	362.79	362.87	362.62	363.95	364.20
2.....	364.95	367.37	365.04	369.70	364.70	364.37	363.70	362.70	362.79	362.54	363.87	364.12
3.....	365.04	367.12	364.95	369.37	364.70	364.29	363.70	362.62	362.79	362.45	363.87	364.04
4.....	366.29	366.95	364.87	369.20	364.70	364.20	363.70	362.62	362.95	362.37	363.87	363.95
5.....	366.45	366.62	364.79	369.04	364.70	364.12	363.70	362.54	362.95	362.37	363.87	363.87
6.....	366.54	366.37	364.70	368.79	364.62	364.04	363.70	362.45	362.87	362.37	363.79	363.87
7.....	366.87	366.04	364.70	368.54	364.62	364.04	363.70	362.45	362.79	362.37	363.79	363.95
8.....	366.95	365.95	364.70	368.37	364.62	363.95	363.70	362.37	362.79	362.37	363.79	363.95
9.....	366.95	366.29	365.04	368.29	364.54	363.95	363.62	362.37	362.70	362.37	363.87	364.04
10.....	367.04	366.45	365.37	368.12	364.54	363.87	363.62	362.37	362.70	362.37	363.87	364.04
11.....	367.12	366.45	365.62	367.95	364.45	363.87	363.62	362.70	362.70	362.37	363.95	364.04
12.....	367.87	366.37	365.87	367.79	364.45	363.79	363.62	362.87	362.62	362.62	363.95	364.04
13.....	367.79	366.37	366.12	367.62	364.37	363.79	363.54	362.87	362.62	362.79	363.95	363.95
14.....	367.62	366.29	366.37	367.45	364.29	363.70	363.54	362.87	362.54	362.79	364.04	363.95
15.....	367.62	366.20	366.62	367.12	364.29	363.70	363.45	362.87	362.45	362.79	364.04	363.95
16.....	367.62	366.12	366.62	366.95	364.20	363.87	363.45	362.87	362.37	362.79	364.12	363.95
17.....	367.70	366.04	366.54	366.70	364.12	363.87	363.37	362.87	362.37	362.79	364.12	363.99
18.....	367.87	365.95	366.45	366.45	364.12	363.79	363.37	362.87	362.45	362.79	364.12	363.95
19.....	368.37	365.87	366.29	366.29	364.12	363.70	363.29	362.87	362.45	362.79	364.20	363.95
20.....	368.37	365.79	366.12	366.04	364.12	363.70	363.29	362.87	362.45	362.95	364.20	363.95
21.....	368.37	365.70	365.95	365.87	364.12	363.87	363.20	362.87	362.45	363.04	364.20	363.95
22.....	368.54	365.62	365.79	365.70	364.20	363.79	363.20	362.95	363.12	363.12	364.20	363.95
23.....	368.54	365.54	365.70	365.54	364.29	363.79	363.20	362.95	363.12	363.12	364.20	364.04
24.....	368.54	365.54	365.70	365.37	364.20	363.87	363.29	362.95	363.04	363.20	364.20	364.04
25.....	368.54	365.45	365.95	365.20	364.29	363.87	363.20	362.95	362.95	363.29	364.20	364.04
26.....	368.45	365.45	367.87	365.04	364.45	363.79	363.12	362.87	362.87	363.70	364.20	364.04
27.....	368.29	365.45	369.04	364.95	364.62	363.70	363.04	362.87	362.87	363.95	364.20	364.04
28.....	368.12	365.45	369.20	364.95	364.70	363.70	363.04	362.79	362.79	363.95	364.20	364.04
29.....	367.95	......	369.20	364.87	364.70	363.70	362.95	362.95	362.79	363.95	364.20	364.04
30.....	367.79	......	369.37	364.79	364.62	363.70	362.95	362.95	362.70	363.95	364.20	364.04
31.....	367.79	......	369.37	......	364.54	......	362.87	362.95	......	363.95	......	364.04

NOTE.— Supersedes table published in report of State Engineer and Surveyor for 1913, Vol. II age 87.

Daily Elevation of Water-surface (B. C. Datum) of Onondaga Lake at Syracuse

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	363.95	365.28	364.61	369.86	367.28	364.36	364.20	363.53	364.70	363.95	363.70	363.95
2.....	363.95	365.45	364.61	370.20	367.11	364.36	364.03	363.28	364.61	363.95	363.70	364.03
3.....	363.95	365.70	364.53	370.53	366.78	364.45	363.86	363.20	364.78	363.86	363.70	364.11
4.....	363.86	365.78	364.36	370.53	366.45	364.45	363.78	363.20	364.95	363.86	363.70	364.11
5.....	363.86	365.78	364.28	370.53	366.28	364.45	363.78	363.20	364.78	363.86	363.70	364.11
6.....	363.86	365.70	364.20	370.36	366.28	364.45	363.78	363.11	364.86	363.86	363.78	364.03
7.....	363.86	365.70	364.11	370.20	366.20	364.45	363.78	363.11	364.86	363.86	363.78	363.95
8.....	363.86	365.45	364.11	370.28	366.11	364.70	363.78	363.11	364.78	363.86	363.78	363.86
9.....	363.86	365.28	364.11	370.53	366.03	364.70	363.78	363.11	364.70	363.78	363.70	363.86
10.....	363.86	365.11	364.11	370.53	365.95	364.61	363.78	363.11	364.61	363.78	363.70	363.86
11.....	363.78	364.95	364.03	370.36	365.95	364.61	363.78	363.11	364.61	363.86	363.70	363.78
12.....	363.78	364.86	364.03	370.36	366.03	364.53	363.78	363.11	364.53	363.86	363.61	363.78
13.....	363.70	364.78	363.95	370.36	366.11	364.53	363.78	363.11	364.53	363.86	363.61	363.78
14.....	363.70	364.70	363.86	370.20	366.20	364.36	363.78	363.11	364.53	363.86	363.61	363.78
15.....	363.70	364.61	363.78	370.03	366.28	364.28	363.86	363.20	364.53	363.86	363.78	363.70
16.....	363.70	364.53	363.70	369.95	366.36	364.20	363.86	363.11	364.53	363.95	363.86	363.70
17.....	363.70	364.45	363.61	369.78	366.28	364.03	363.95	363.11	364.53	363.95	363.78	363.70
18.....	363.70	364.45	364.03	369.61	366.11	363.95	364.03	363.11	364.53	363.95	363.78	363.70
19.....	363.70	364.36	364.20	369.28	365.95	363.86	363.95	363.11	364.53	363.95	363.78	363.70
20.....	363.61	364.36	364.20	369.11	365.70	363.86	363.86	363.11	364.45	363.86	363.70	363.86
21.....	363.61	364.28	364.20	368.95	365.45	363.95	363.70	363.11	364.45	363.86	363.70	363.95
22.....	363.53	364.28	364.20	368.78	365.28	363.95	363.61	363.11	364.36	363.86	363.70	363.95
23.....	363.53	364.28	364.20	368.61	365.11	363.95	363.61	363.11	364.28	363.78	363.70	363.95
24.....	363.53	364.36	364.20	368.36	364.95	363.95	363.70	363.61	364.20	363.78	363.70	363.86
25.....	363.53	364.36	364.45	368.28	364.86	363.86	363.61	363.78	364.20	363.78	363.78	363.86
26.....	363.53	364.45	364.95	368.03	364.78	363.86	363.61	363.78	364.11	363.78	363.78	363.86
27.....	363.61	364.45	366.61	367.86	364.78	363.86	363.53	363.78	364.11	363.70	363.78	363.78
28.....	363.78	364.53	367.78	367.78	364.70	363.86	363.53	363.78	364.11	363.70	363.78	363.78
29.....	364.11	......	368.78	367.61	364.53	364.36	363.53	364.28	364.03	363.70	363.78	363.70
30.....	364.28	......	369.20	367.45	364.45	364.36	363.53	364.70	364.03	363.70	363.78	363.70
31.....	364.70	......	369.61	......	364.28	......	363.53	364.78	......	363.70	......	363.70

Daily Elevation of Water-surface (B. C. Datum) of Onondaga Creek at Temple Street, Syracuse

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	380.66	*a*	*a*	382.66	380.29	379.06	380.01	*a*	379.21	378.81	*a*	379.81
2.....	379.91	380.59	*a*	382.41	380.11	379.06	379.76	*a*	378.63	378.76	378.83	381.41
3.....	381.01	380.29	*a*	379.16	*a*	378.96	379.61	380.51	382.21	378.73	378.81	380.11
4.....	*a*	380.29	*a*	381.71	379.96	379.41	*a*	380.53	381.16	*a*	378.84	379.64
5.....	380.86	380.26	*a*	*a*	380.29	379.89	*a*	380.30	379.91	378.83	378.81	379.59
6.....	378.66	379.61	*a*	381.03	381.01	379.81	379.38	379.81	*a*	378.79	378.79	*a*
7.....	379.26	379.69	*a*	380.93	380.44	*a*	379.41	378.96	379.71	378.79	378.85	379.63
8.....	379.41	*a*	*a*	382.01	379.84	380.56	379.43	380.96	379.16	378.83	*a*	379.61
9.....	379.44	379.51	379.21	383.89	379.84	381.26	379.43	*a*	379.13	378.83	379.09	379.83
10.....	379.93	379.56	379.16	382.11	*a*	380.21	379.43	381.13	379.11	378.81	379.06	380.41
11.....	*a*	379.59	379.19	381.69	379.84	380.16	380.81	381.22	379.09	*a*	379.03	379.81
12.....	379.71	379.41	379.16	......	379.81	380.01	*a*	381.02	379.06	378.79	378.99	379.79
13.....	379.71	379.11	379.14	......	381.13	379.99	379.31	381.09	*a*	378.76	379.01	*a*
14.....	379.65	379.26	379.16	......	380.96	*a*	379.35	381.12	379.09	378.73	379.19	379.53
15.....	379.51	*a*	*a*	......	380.26	380.01	379.43	380.51	378.96	378.76	*a*	379.46
16.....	379.61	379.16	379.71	......	380.06	379.99	379.39	*a*	378.86	378.96	379.36	379.46
17.....	379.61	379.16	380.01	......	*a*	379.91	379.27	381.09	378.85	379.26	379.29	379.41
18.....	*a*	379.19	381.01	......	379.81	379.81	379.63	381.30	378.81	*a*	379.21	379.43
19.....	379.46	379.21	380.53	......	379.69	379.79	*a*	381.26	378.79	378.89	379.16	379.51
20.....	379.44	379.21	380.16	......	379.63	380.33	379.66	381.21	*a*	378.87	379.16	*a*
21.....	379.41	379.21	379.71	......	379.56	*a*	379.51	383.55	378.94	378.76	379.18	379.73
22.....	379.39	*a*	*a*	......	379.60	380.21	379.61	383.31	378.91	378.74	*a*	379.71
23.....	379.46	379.21	379.71	......	379.61	380.23	379.48	*a*	378.69	378.76	379.20	379.69
24.....	379.43	379.21	379.59	......	*a*	380.34	380.66	382.19	378.73	378.79	379.20	379.69
25.....	*a*	379.23	379.81	......	379.46	380.49	379.77	382.49	378.99	*a*	379.91	379.69
26.....	379.86	379.20	382.21	......	379.41	380.43	*a*	382.11	379.01	378.83	379.76	379.69
27.....	379.36	379.19	387.76	......	379.31	380.30	379.62	381.69	*a*	378.91	379.73	*a*
28.....	379.66	379.16	387.11	......	379.31	*a*	379.21	381.85	379.03	378.93	379.71	379.69
29.....	380.79	......	*a*	......	379.16	382.79	379.01	382.11	378.91	378.89	*a*	379.71
30.....	381.73	......	384.21	......	379.11	381.66	379.01	*a*	378.83	378.81	379.79	380.71
31.....	381.16	......	383.61	......	*a*	......	380.43	379.63	......	378.83	......	380.67

a No record.

OWASCO OUTLET

DESCRIPTION

Owasco lake is one of the finger lake group in central New York and is generally rated as the sixth in size. It is about 11 miles long and has a maximum width of 1.25 miles. It has a water surface area of approximately 12.4 square miles and is drained by Owasco outlet.

The lake extends in a north and south direction and lies wholly within the boundaries of Cayuga county. The southern half of the lake, on both the east and west sides, is flanked by steep, sloping hills, rising to elevations of 500 to 800 feet above the lake surface, which is at an elevation of 710 feet above tide water. These hills are rather deeply indented by numerous small streams that enter the lake at almost right angles from either side. To the south of the head of the lake and extending for some 17 or 18 miles is a rather narrow valley, the floor of which is about one-half mile wide at the lake and narrows up as it approaches the southern extremity. This valley is drained by Owasco inlet, which rises near Freeville in Tompkins county.

The dividing line for the drainage basin is at an elevation of from 700 to 1,300 feet above sea level on the west and attains an altitude of some 1,600 feet on the east. The western line falls about 2 miles back from the lake; the eastern divide extends some 7 or 8 miles. The general shape of the drainage basin is long and narrow, the northern end terminating on the shores of Seneca river, into which the waters drain.

Owasco lake occupies about the center of the drainage basin north and south. From the foot of the lake north the descent is very rapid, there being 325 feet fall in the 17 miles between the outlet and Seneca river. One hundred and ten feet of this fall is practically within the city limits of Auburn and is utilized by the numerous manufacturing interests in that city. From a point just above Troopsville to Port Byron, a distance of about 5 miles, there is a fall of 130 feet, very little of which is developed. A State dam about one mile below the outlet of the lake practically controls the low and medium flow of this drainage basin. At Port Byron there is a small diverting dam owned by the State for the purpose of supplying water to the Erie canal. The city of Auburn derives its water supply from Owasco lake and diverts an average of about 6,500,000 gallons daily. The drainage area is representative of the farming district in central New York and is fairly well timbered.

OWASCO OUTLET NEAR AUBURN

Location.— On the farm of George Ridley, 3¾ miles below the State dam at the outlet of Owasco lake, 2 miles below the center of the city of Auburn.

Records available.— November 17, 1912, to December 31, 1914.

Drainage area.— 206 square miles. (Measured on U. S. Geological Survey topographic sheets.)

Gage.— Gurley automatic recording gage installed over a concrete well 3½ feet square and 6 feet deep (inside dimensions). Gage well connected with the river by a 4-inch cast iron pipe.

Control.— Gage heights registered by this gage controlled by a low concrete weir situated a short distance below the gage. The crest of this weir is 1 foot wide and the slopes of both upstream and downstream faces are 2 on 1. A small horizontal apron, built on a level with bed of stream, extends downstream 2½ feet from toe of dam. The mean elevation of the left-hand end of the dam for a distance of 50 feet is gage height 1.28 feet; the remaining 50 feet of the crest of the dam is at gage height 2.12 feet.

Discharge measurements.— Made by wading directly opposite the gage in low water and from a cable and car at the same section in high water.

Winter flow.— Ice does not form to a sufficient extent to obstruct the control, except during extreme cold.

Diversions.— An average flow of about 10 second-feet is pumped from Owasco lake for the municipal water supply of the city of Auburn. Proportion returning to stream above the gaging station not known.

Accuracy.— Discharge measurements are consistent and estimates are excellent. The discharge corresponding to the mean daily gage height does not represent the mean daily discharge. The mean gage height is therefore not published and the daily discharge in the following table is the mean of 24 hourly discharges for each day.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Owasco Outlet near Auburn

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Aug. 4 *a*	C. H. Pierce	2.17	156

a Measurement made by wading 95 feet below gage.

Daily Discharge, in Second-feet, of Owasco Outlet near Auburn

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	.....	*a*	1,960	600	177	118.0	155	286	192.0	*a*60.0	117.0
2	......	.....	......	2,120	530	159	121.0	*a*155	372	183.0	150.0	117.0
3	......	.....	......	2,180	*a*510	159	120.0	161	361	201.0	158.0	118.0
4	*a*	.....	......	2,090	476	153	91.5	155	347	*a*69.6	149.0	107.0
5	129	.....	211	*a*1,960	463	148	*a*91.1	149	404	170.0	160.0	108.0
6	134	.....	211	1,790	372	150	154.0	158	*a*373	149.0	157.0	*a*111.0
7	136	.....	237	1,680	366	*a*148	138.0	168	385	148.0	153.0	117.0
8	132	.....	*a*247	1,820	372	174	136.0	156	296	159.0	*a*59.9	124.0
9	139	.....	234	1,970	......	176	148.0	*a*149	346	175.0	142.0	121.0
10	140	.....	264	1,880	*a*	169	137.0	170	375	158.0	143.0	115.0
11	*a*143	.....	233	1,820	......	163	144.0	153	373	*a*126.0	153.0	117.0
12	151	.....	220	*a*1,710	......	176	*a*128.0	151	357	179.0	113.0	108.0
13	154	.....	263	1,610	......	152	149.0	147	*a*312	166.0	133.0	*a*112.0
14	201	.....	232	1,510	......	*a*134	136.0	142	326	161.0	149.0	125.0
15	247	.....	*a*235	1,450	584	168	147.0	146	302	167.0	*a*57.3	99.0
16	254	.....	272	1,430	569	161	148.0	*a*143	267	152.0	128.0	106.0
17	220	.....	281	1,390	*a*533	183	327.0	149	315	162.0	134.0	108.0
18	*a*255	.....	287	1,330	500	172	372.0	120	309	*a*86.2	144.0	111.0
19	273	.....	307	*a*1,260	486	181	*a*397.0	134	262	167.0	151.0	93.5
20	316	.....	305	1,210	483	140	317.0	130	*a*116	162.0	135.0	*a*104.0
21	342	.....	300	1,170	418	*a*148	245.0	125	212	153.0	127.0	107.0
22	397	.....	*a*301	1,120	370	158	246.0	133	102	148.0	*a*127.0	110.0
23	394	.....	299	1,080	351	163	241.0	*a*127	227	141.0	135.0	100.0
24	442	.....	289	1,030	*a*317	159	227.0	169	220	137.0	132.0	96.0
25	*a*272	.....	315	1,020	302	149	225.0	153	223	*a*68.5	136.0	86.1
26	220	.....	409	*a*978	301	151	*a*212.0	141	248	143.0	119.0	118.0
27	218	.....	595	900	302	155	216.0	150	*a*179	149.0	132.0	*a*116.0
28	220	.....	1,080	788	292	*a*142	185.0	143	211	140.0	118.0	80.8
29	207	.....	*a*1,390	714	287	140	149.0	202	203	137.0	*a*118.0	84.3
30	......	.....	1,690	667	226	130	161.0	*a*194	192	152.0	127.0	98.5
31	......	.....	1,870	......	*a*156	......	156.0	228	......	169.0	......	105.0
Mean	216	290	434	1,450	412	158	187.0	154	285	151.0	130.0	108.0

a Sunday.
NOTE.— Daily discharge determined from a very well-defined rating curve.

Monthly Discharge of Owasco Outlet near Auburn
[Drainage area, 206 square miles]

1914	Discharge in Second-feet				Run-off	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January	442	129	216	1.05	1.21	B
February	....	....	290	1.41	1.47	D
March	1,870	210	434	2.11	2.43	A
April	2,180	667	1,450	7.04	7.86	A
May	600	156	412	2.00	2.31	A
June	183	130	158	0.767	0.86	A
July	397	91.1	187	0.908	1.05	A
August	228	125	154	0.748	0.86	A
September	404	102	285	1.38	1.54	A
October	201	a68.5	151	0.733	0.85	A
November	160	a57.3	130	0.631	0.70	A
December	125	80.8	108	0.524	0.60	A
The year	2,180	57.3	330	1.60	21.74	......

NOTE.— To make these data cover complete months, the mean discharge has been estimated for periods as follows: January 1 to 4, inclusive, 132 second-feet; January 30 and 31, 210 second-feet; March 1 to 4, inclusive, 217 second-feet; May 9 to 14, inclusive, 435 second-feet. The mean discharge in February was estimated from three gage heights observed during the month and the elevations of Owasco lake.

a Sunday.

CLYDE RIVER

DESCRIPTION

Clyde river joins Seneca river in the Montezuma marsh near the foot of Cayuga lake. Clyde river is formed by the junction of Canandaigua outlet and Ganargua creek, at Lyons. Its total length is about 20 miles and the greater portion of its course lies through a broad, marshy valley.

Daily Elevation of Water-surface (B. C. Datum) of Clyde River at Clyde

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	379.82	384.14	380.76	389.42	384.22	382.42	380.36	379.82	380.62	380.14	380.32	380.32
2.....	379.82	384.06	381.12	388.64	383.92	382.36	380.32	379.89	380.44	380.12	380.24	380.42
3.....	379.86	383.96	381.16	388.54	383.66	382.39	380.16	379.96	380.76	380.12	380.72	380.59
4.....	379.79	383.39	381.02	388.42	383.49	382.49	380.06	379.99	380.84	380.12	379.94	380.69
5.....	379.74	383.64	380.79	387.92	383.52	382.44	380.02	379.89	380.69	380.09	380.36	380.69
6.....	379.82	382.79	380.59	387.44	384.46	382.39	379.99	379.79	380.56	380.04	380.14	380.56
7.....	379.79	382.06	380.59	387.04	385.54	382.32	379.99	379.76	380.49	380.06	379.99	380.39
8.....	379.84	381.72	380.64	387.04	385.64	382.32	379.96	379.79	380.42	380.04	379.72	380.32
9.....	379.89	381.49	380.69	387.87	385.36	382.46	379.92	379.79	380.34	380.12	379.89	380.22
10.....	379.96	382.09	380.54	388.09	384.92	382.09	380.02	379.82	380.29	380.14	380.04	380.19
11.....	380.04	381.64	380.54	387.89	384.36	381.99	379.89	379.94	380.29	380.16	380.06	380.04
12.....	380.06	381.06	380.54	387.47	384.07	381.82	379.89	379.89	380.22	380.09	380.09	380.09
13.....	380.16	380.74	380.44	387.04	384.96	381.56	379.92	379.92	380.16	380.12	380.12	380.14
14.....	380.69	380.64	380.32	386.67	386.39	381.39	379.92	379.92	380.19	380.22	380.09	380.12
15.....	380.16	380.49	380.39	386.34	386.44	381.22	379.94	379.84	380.22	380.24	380.19	380.02
16.....	379.96	380.39	380.42	386.42	386.04	380.76	379.94	379.82	380.29	380.06	380.19	379.96
17.....	379.84	380.36	380.94	386.84	385.46	380.54	379.96	379.76	380.24	380.34	380.29	379.94
18.....	379.86	380.26	383.02	386.92	384.99	380.32	380.89	379.86	380.19	380.09	380.29	379.86
19.....	379.84	380.26	384.46	386.72	384.32	380.54	380.64	379.92	380.14	380.32	379.99	379.79
20.....	379.79	300.19	384.24	386.36	383.36	380.54	380.16	379.94	380.14	380.26	380.22	379.74
21.....	379.82	380.29	[illegible]	386.07	382.54	380.49	380.09	379.99	380.16	380.24	380.22	379.86
22.....	379.86	380.52	383.76	385.74	382.06	380.29	379.94	380.39	380.12	380.06	379.99	379.94
23.....	379.84	380.84	383.64	385.27	382.36	380.54	379.96	380.64	380.09	380.06	380.24	380.09
24.....	379.82	380.89	383.66	384.92	382.66	380.49	379.96	380.69	380.29	380.06	379.99	379.99
25.....	379.84	380.86	383.99	384.72	382.66	380.44	379.94	381.54	380.16	380.12	380.04	379.89
26.....	380.02	380.84	385.66	385.24	382.42	380.24	380.06	381.26	380.26	380.02	380.02	379.84
27.....	379.94	380.79	389.12	385.54	382.29	380.29	380.09	381.22	380.16	380.00	380.06	379.84
28.....	379.96	380.72	390.59	385.44	381.59	380.34	380.16	381.09	380.09	380.09	380.04	379.84
29.....	380.66	......	391.62	385.02	381.66	380.52	379.96	380.86	380.14	380.09	380.04	379.86
30.....	382.74	......	391.32	384.54	382.09	380.49	380.02	380.74	380.09	380.09	380.19	379.96
31.....	383.86	......	390.44	......	382.44	......	379.92	380.66	......	380.06	......	380.09

Daily Elevation of Water-surface (B. C. Datum) of Clyde River at Geneva St., Lyons

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	*a*	*a*	390.50	398.40	392.85	391.50	391.10	390.10	391.20	390.80	390.70	390.85
2.....	*a*	393.55	390.45	398.30	392.60	391.50	391.00	*a*	391.00	390.75	390.30	390.95
3.....	*a*	393.00	390.50	398.75	392.55	391.40	390.90	391.00	391.60	390.50	390.30	391.10
4.....	*a*	394.50	390.50	398.15	392.60	391.40	390.80	390.50	391.20	390.50	391.20	391.30
5.....	390.35	393.95	390.50	397.20	392.65	391.40	390.60	390.45	391.10	390.50	391.20	391.30
6.....	390.25	392.10	390.50	396.40	395.40	391.70	390.60	390.30	391.00	390.80	390.70	391.30
7.....	390.35	392.00	390.60	396.90	395.90	391.70	390.60	390.40	391.30	390.70	390.30	391.30
8.....	390.50	391.80	390.60	396.50	395.05	392.30	390.40	390.40	391.05	390.70	390.40	391.10
9.....	390.40	391.40	390.70	398.50	394.65	391.70	390.60	390.40	391.00	390.70	390.65	391.00
10.....	390.60	391.40	390.70	397.90	394.00	391.50	390.80	390.65	390.80	390.70	390.70	390.70
11.....	390.65	391.15	390.80	397.40	393.30	391.30	390.90	390.50	390.80	390.70	390.80	390.70
12.....	390.70	391.00	390.70	396.60	393.05	391.35	390.80	390.50	390.70	390.70	390.70	390.70
13.....	390.65	390.80	390.60	395.80	396.50	391.30	390.80	390.50	390.90	390.70	390.70	390.60
14.....	390.65	390.65	390.50	395.05	397.10	391.30	390.90	390.40	391.10	391.30	390.70	390.60
15.....	390.45	390.65	390.70	394.50	395.40	391.20	390.80	390.40	390.80	390.50	390.70	390.60
16.....	390.25	390.65	391.05	396.15	394.65	391.20	390.60	390.40	390.70	391.40	391.70	390.60
17.....	390.25	390.50	392.00	397.00	394.20	391.10	390.70	390.60	390.60	390.70	391.00	390.60
18.....	390.25	390.65	396.70	396.45	393.50	391.20	391.60	390.45	390.70	390.80	390.70	390.60
19.....	390.30	390.60	396.50	395.60	392.60	391.10	391.00	390.60	390.90	391.00	391.25	390.60
20.....	390.25	390.55	395.05	395.00	392.40	391.10	390.65	390.60	390.80	391.00	390.85	390.60
21.....	390.25	390.50	395.65	394.45	392.25	391.10	390.60	390.60	390.70	390.80	390.90	390.60
22.....	390.35	390.50	395.00	394.05	392.20	391.10	390.50	390.65	390.70	390.80	390.80	390.60
23.....	390.30	390.50	394.35	393.60	392.10	391.40	*a*	390.70	390 70	390.80	390.75	390.60
24.....	390.30	390.55	394.80	393.20	391.98	391.30	390.60	392.20	391.70	390.80	390.75	390.60
25.....	390.40	390.45	395.40	393.00	391.90	391.20	390.60	392.00	391.20	390.80	390.80	390.60
26.....	390.40	390.50	399.28	393.60	391.90	391.20	*a*	391.40	391.00	390.80	390.80	390.60
27.....	390.85	390.55	400.82	394.40	391.80	391.10	392.30	391.00	390.90	390.80	390.80	390.60
28.....	390.70	......	402.27	394.10	391.80	391.10	390.90	390.80	390.80	390.80	390.80	390.60
29.....	391.65	......	402.00	393.50	391.50	391.50	390.80	390.80	390.80	390.75	390.80	390.40
30.....	395.10	......	400.58	393.10	391.60	391.25	390.50	391.50	390.80	390.70	391.10	390.40
31.....	394.90	......	399.45	......	391.50	......	390.50	391.30	......	390.70	......	390.40

a No record.

GANARGUA CREEK

DESCRIPTION

Ganargua creek proper rises near Victor. Its course is northeasterly to Macedon. It then flows easterly, winding broadly through the system of duplicate valleys extending easterly from Macedon. The principal tributary of Ganargua creek is Mud creek, which rises in the hilly region near the head of Canandaigua lake and flows northward about 20 miles, entering Ganargua creek at Victor. Ganargua creek is often called Mud creek throughout its course to Lyons. The valley through which it flows is, however, called Ganargua valley. The tributary drainage is of the characteristic glacial kame type and the tributaries are rather sparse, flowing oftentimes first north and then south between elongated hills, until they find their way to Ganargua creek.

Daily Elevation of Water-surface (B. C. Datum) of Ganargua Creek, North of Newark

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	408.80	411.80	410.60	412.80	409.50	409.10	408.90	408.60	408.80	408.50	408.60	409.00
2......	408.80	411.80	410.70	412.60	409.50	409.00	408.90	408.70	408.80	408.50	408.60	409.20
3......	408.70	411.90	410.70	412.30	409.40	409.00	408.80	408.60	408.70	408.50	408.50	409.00
4......	408.80	412.10	410.70	412.00	409.60	409.00	408.80	408.60	408.60	408.60	408.50	409.00
5......	408.80	411.70	410.70	411.80	411.70	409.10	408.60	408.60	408.70	408.60	408.50	408.90
6......	408.80	411.40	410.60	411.40	412.30	409.10	408.70	408.60	408.80	408.60	408.60	408.80
7......	408.90	411.20	410.60	411.00	411.40	408.90	408.80	408.70	408.60	408.50	408.60	408.80
8......	408.90	411.00	410.60	411.20	411.00	408.90	408.80	408.80	408.70	408.50	408.70	408.90
9......	408.70	410.70	410.60	411.00	410.80	409.00	408.70	408.70	408.60	408.50	408.80	408.80
10......	408.70	*a*	410.30	411.00	410.90	409.00	408.60	408.70	408.60	408.40	408.60	408.80
11......	408.70	410.70	410.20	410.80	410.90	409.00	408.60	408.60	408.50	403.40	408.60	408.70
12......	408.70	410.70	410.00	410.60	411.30	408.90	408.50	408.60	408.50	408.60	408.50	408.70
13......	408.80	410.80	409.70	410.60	412.90	408.90	408.50	408.70	408.60	408.60	408.60	*a*
14......	408.80	410.70	409.50	410.50	413.20	409.10	408.50	408.70	408.70	408.60	408.60	*a*
15......	408.80	410.70	409.30	410.50	411.10	409.30	408.40	408.60	408.60	408.80	408.80	*a*
16......	408.70	410.70	409.40	410.80	410.00	409.00	408.50	408.70	408.60	408.80	408.70	*a*
17......	408.70	410.80	411.40	410.50	409.90	409.00	408.50	408.90	408.70	408.80	408.70	*a*
18......	408.80	410.80	412.60	410.60	409.70	408.90	408.70	409.20	408.70	408.70	408.60	*a*
19......	408.80	410.60	412.00	410.20	409.70	408.90	408.80	409.00	408.60	408.50	408.60	*a*
20......	408.80	410.60	411.60	410.00	409.50	409.10	408.90	408.80	408.60	408.50	408.80	*a*
21......	408.70	410.60	411.30	409.70	409.50	409.30	408.90	408.90	408.50	408.50	408.70	*a*
22......	408.70	410.70	411.00	409.70	409.40	408.90	408.70	408.70	408.50	408.40	408.80	*a*
23......	408.70	410.70	410.70	409.80	409.40	408.90	408.70	408.90	408.60	408.50	408.70	*a*
24......	408.70	410.70	410.60	409.70	409.00	408.70	408.70	409.20	408.50	408.50	408.70	*a*
25......	408.80	410.70	411.00	409.70	409.10	408.80	408.80	409.00	408.50	408.50	408.60	*a*
26......	408.90	410.60	412.80	409.80	409.10	408.70	408.60	408.80	408.40	408.60	408.60	*a*
27......	409.30	410.60	415.90	409.60	409.00	408.70	408.60	408.80	408.40	408.60	408.70	*a*
28......	409.80	410.60	418.00	409.70	409.00	408.90	408.60	408.70	408.60	408.50	408.80	*a*
29......	410.40	......	416.50	409.70	409.00	409.30	408.70	408.70	408.60	408.40	408.70	*a*
30......	410.80	......	414.90	409.60	409.10	409.00	408.90	408.80	408.50	408.40	408.90	*a*
31......	411.30	......	413.70	......	409.00	......	408.60	408.70	......	408.40	......	*a*

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Ganargua Creek near Palmyra

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	422.13	423.43	422.03	423.93	422.18	422.43	422.23	422.23	422.23	422.38	422.43	422.53
2......	422.13	422.93	422.03	424.23	422.08	422.48	422.18	422.23	422.28	422.43	422.38	422.43
3......	422.08	423.43	422.03	424.53	421.98	422.48	422.18	422.13	422.33	422.38	422.33	422.58
4......	422.08	423.83	422.03	424.03	421.93	422.43	422.18	422.13	422.43	422.43	422.38	422.73
5......	422.08	423.13	422.03	423.73	422.23	422.53	422.18	422.08	422.28	422.33	422.33	422.73
6......	422.23	422.73	422.53	423.53	423.93	422.58	422.18	422.13	422.23	422.38	422.33	422.83
7......	422.08	422.68	422.48	423.23	423.73	422.58	422.18	422.13	422.23	422.33	422.33	422.58
8......	422.13	424.23	422.43	424.38	422.68	422.68	422.18	422.13	422.23	422.33	422.38	422.58
9......	422.13	422.63	422.48	424.33	422.63	422.53	422.23	422.33	422.18	422.38	422.33	422.53
10......	422.43	422.63	422.33	423.93	422.63	422.53	422.18	422.33	422.23	422.38	422.43	422.43
11......	422.43	422.43	422.33	423.83	422.63	422.48	422.18	422.23	422.18	422.33	422.43	422.38
12......	422.38	422.33	422.23	423.48	422.68	422.43	422.23	422.23	422.23	422.38	422.38	422.38
13......	422.38	422.28	422.23	423.08	424.03	422.43	422.18	422.18	422.23	422.38	422.33	422.33
14......	422.33	422.22	422.13	422.83	423.03	422.48	422.23	422.13	422.28	422.33	422.33	422.33
15......	422.28	422.22	422.23	422.43	422.63	422.48	422.23	422.18	422.33	422.38	422.33	422.38
16......	422.03	422.22	422.33	423.33	422.68	422.48	422.18	422.13	422.38	422.43	422.38	422.33
17......	422.03	422.28	422.98	423.23	422.73	422.43	422.23	422.18	422.43	422.38	422.43	422.33
18......	422.03	422.28	424.13	423.13	422.13	422.48	422.18	422.18	422.53	422.43	422.48	422.23
19......	422.08	422.23	423.43	422.93	421.83	422.43	422.23	422.13	422.38	422.53	422.38	422.28
20......	422.13	422.23	423.33	422.83	421.63	422.48	422.18	422.18	422.38	422.53	422.33	422.18
21......	422.13	422.28	423.43	422.63	421.33	422.43	422.13	422.43	422.33	422.48	422.38	422.13
22......	422.03	422.23	423.33	422.53	421.33	422.38	422.13	422.78	422.38	422.38	422.38	422.08
23......	422.08	422.18	423.23	422.48	421.43	422.38	422.38	422.43	422.43	422.43	422.38	422.03
24......	422.08	422.18	423.28	422.43	422.03	422.33	422.23	422.48	422.38	422.48	422.43	421.83
25......	422.03	422.13	423.33	422.48	421.93	422.28	422.03	422.68	422.48	422.43	422.38	421.88
26......	422.08	422.18	425.23	422.63	423.08	422.28	421.93	422.43	422.43	422.48	422.48	421.88
27......	422.18	422.28	426.88	422.58	422.03	422.33	421.93	422.23	422.43	422.48	422.48	421.93
28......	422.33	422.03	427.51	422.53	422.03	422.38	422.03	422.18	422.38	422.53	422.58	421.88
29......	422.53	......	425.63	422.43	422.03	422.23	422.23	422.28	422.43	422.48	422.83	421.83
30......	423.93	......	424.83	422.43	422.13	422.33	422.23	422.23	422.38	422.38	422.43	421.53
31......	423.53	......	424.53	......	422.33	......	422.18	422.18	......	422.38	......	422.03

CANANDAIGUA OUTLET

DESCRIPTION

Canandaigua lake occupies one of the elongated depressions extending in nearly a north and south direction in the central lake region of New York. The drainage tributary to the lake is chiefly short lateral streams from the steep slopes of adjacent hillsides. The outflow from the lake is regulated to some extent by gates. The lake is at elevation about 686. From the foot of the lake at Canandaigua the outlet flows a little north to Manchester, a distance of 7 miles. In this distance a fall of 100 feet occurs, which is chiefly concentrated at several water-power dams. From Manchester the stream flows easterly 12 miles and thence northeasterly 8 miles, joining Ganargua creek at Lyons to form the Clyde river. In the easterly portion of its course the stream winds with large bends through a broad sloping valley of fertile land. The fall is mostly utilized at water-power dams. The tributary drainage is moderately rolling and is interspersed with glacial kames. These are lenticular hills extending usually in a north and south direction. At Phelps, Flint creek, which is the largest tributary, enters the outlet. Flint creek drains a valley similar to the adjacent lake basins. This valley is not at present occupied by a lake, but contains an extensive swamp, reaching several miles southward from Gorham.

CANANDAIGUA OUTLET AT ALLOWAY

This gaging station was established September 18, 1906, by F. P. Williams for this Department. It is located at a highway bridge crossing the stream 2½ miles above Lyons. The gage has a vertical scale divided decimally and reading from zero to 10 feet. It is attached to the downstream face of the left-hand abutment of the bridge and has its zero mark at elevation 403.32. Current-meter discharge measurements are made from the downstream side of the bridge, which has a span of 95 feet between abutments.

Daily Elevation of Water-surface (B. C. Datum) of Canandaigua Outlet at Alloway

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	404.22	406.52	404.32	409.02	406.62	405.12	404.52	403.92	404.32	404.12	403.92	404.22
2	404.12	405.72	404.32	409.52	406.32	405.12	404.52	403.92	404.32	404.12	404.02	404.32
3	404.32	405.52	404.52	409.32	406.22	405.12	404.52	403.92	405.42	404.12	404.12	404.32
4	404.22	406.32	404.82	408.57	406.12	405.12	404.52	404.22	405.02	404.12	404.12	404.32
5	404.02	406.12	405.02	408.42	407.22	405.02	404.52	404.22	404.52	404.12	404.12	404.32
6	403.92	405.82	405.12	407.72	408.22	404.92	404.42	404.12	404.52	404.12	404.12	404.32
7	403.92	405.52	405.12	407.62	407.22	404.92	404.32	404.12	404.42	404.12	404.12	404.22
8	403.92	405.32	405.12	408.92	407.82	404.92	404.22	403.92	404.32	404.12	404.12	404.12
9	404.22	405.22	405.02	409.02	407.92	404.82	404.12	403.92	404.32	404.12	404.22	404.12
10	404.32	405.12	404.92	408.57	407.32	404.72	404.12	404.12	404.32	404.12	404.32	404.12
11	404.32	405.12	404.92	408.42	407.12	404.62	404.12	404.02	404.32	404.12	404.32	404.12
12	404.27	405.12	404.92	408.32	406.52	404.52	404.12	403.92	404.22	404.12	404.32	404.12
13	404.12	405.12	404.82	407.72	409.52	404.52	404.12	404.12	404.32	404.12	404.32	404.12
14	404.12	405.12	404.72	407.42	409.12	404.52	404.12	404.12	404.32	404.12	404.32	404.22
15	404.12	405.12	404.82	408.67	408.32	404.52	404.12	404.12	404.32	404.22	404.32	404.32
16	404.12	405.12	405.32	408.57	407.62	404.52	404.12	404.02	404.32	404.32	404.22	404.32
17	404.12	405.12	406.62	408.37	407.32	404.52	404.12	403.92	404.22	404.32	404.12	404.32
18	404.12	405.02	410.22	407.92	407.02	404.52	405.82	403.92	404.12	404.22	404.12	404.32
19	404.12	404.92	409.02	407.62	406.72	404.52	405.02	403.92	404.12	404.12	404.12	404.32
20	404.12	404.92	408.52	407.42	406.62	404.52	404.42	403.92	401.12	404.12	404.12	404.32
21	404.12	404.92	408.22	407.22	406.52	404.52	404.32	404.32	404.12	404.12	404.12	404.22
22	404.12	404.92	407.72	407.12	406.42	404.52	404.12	405.12	404.12	404.12	404.12	404.12
23	404.12	404.82	407.72	407.12	406.32	404.52	404.12	404.52	404.12	404.12	404.12	404.12
24	404.12	404.72	407.72	406.92	406.12	404.52	404.12	406.32	404.12	404.12	404.12	404.12
25	404.12	404.72	408.42	406.92	406.12	404.52	404.12	405.62	404.12	404.12	404.12	404.12
26	404.12	404.72	410.72	407.42	405.92	404.52	404.12	405.32	404.12	404.02	404.12	404.12
27	404.22	404.72	410.62	407.42	405.62	404.52	404.12	404.52	404.12	403.92	404.12	404.12
28	404.32	404.72	411.22	407.02	405.52	404.52	404.12	404.42	404.12	403.92	404.12	404.22
29	405.02	......	410.82	406.82	405.32	404.52	404.02	404.82	404.12	403.92	404.12	404.52
30	407.92	......	410.02	406.72	405.22	404.52	403.92	404.92	404.12	403.92	404.12	404.62
31	406.92	......	409.52	......	405.12	......	403.92	404.62	......	403.92	......	404.72

Daily Discharge, in Second-feet, of Canandaigua Outlet at Alloway

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	124	862	144	*b*1,031	898	370	192	80	144	108	80	124
2.....	108	566	144	*b*1,031	786	370	192	80	144	108	92	144
3.....	144	496	192	*b*1,031	748	370	192	80	464	108	108	144
4.....	124	786	276	*b*1,031	712	370	192	124	338	108	108	144
5.....	92	712	338	*b*1,031	*b*1,031	338	192	124	192	108	108	144
6.....	80	602	370	*b*1,031	*b*1,031	306	166	108	192	108	108	144
7.....	80	496	370	*b*1,031	*b*1,031	306	144	108	166	108	108	124
8.....	80	430	370	*b*1,031	*b*1,031	306	124	80	144	108	108	108
9.....	124	400	338	*b*1,031	*b*1,031	276	108	80	144	108	124	108
10.....	144	370	306	*b*1,031	*b*1,031	248	108	108	144	108	144	108
11.....	144	370	306	*b*1,031	*b*1,031	220	108	92	144	108	144	108
12.....	124	370	306	*b*1,031	862	192	108	80	124	108	144	108
13.....	108	370	276	*b*1,031	*b*1,031	192	108	108	144	108	144	108
14.....	108	370	248	*b*1,031	*b*1,031	192	108	108	144	108	144	124
15.....	108	370	276	*b*1,031	*b*1,031	192	108	108	144	124	144	144
16.....	108	370	430	*b*1,031	*b*1,031	192	108	92	144	144	124	144
17.....	108	370	898	*b*1,031	*b*1,031	192	108	80	124	144	108	144
18.....	108	338	*b*1,031	*b*1,031	*b*1,031	192	602	80	108	124	108	144
19.....	108	306	*b*1,031	*b*1,031	934	192	338	80	108	108	108	144
20.....	108	306	*b*1,031	*b*1,031	898	192	166	80	108	108	108	144
21.....	108	306	*b*1,031	*b*1,031	862	192	144	144	108	108	108	124
22.....	108	306	*b*1,031	*b*1,031	824	192	108	370	108	108	108	108
23.....	108	276	*b*1,031	*b*1,031	786	192	108	192	108	108	108	108
24.....	108	248	*b*1,031	1,006	712	192	108	786	108	108	108	108
25.....	108	248	*b*1,031	1,006	712	192	108	532	108	108	108	108
26.....	108	248	*b*1,031	*b*1,031	638	192	108	430	108	92	108	108
27.....	124	248	*b*1,031	*b*1,031	532	192	108	192	108	80	108	108
28.....	144	248	*b*1,031	*b*1,031	496	192	108	166	108	80	108	124
29.....	338	......	*b*1,031	970	430	192	92	276	108	80	108	192
30.....	*b*1,031	......	*b*1,031	934	400	192	80	306	108	80	108	220
31.....	1,006	......	*b*1,031	......	370	......	80	220	......	80	......	248
Mean...	178	407	646	1,024	839	238	149	177	148	106	115	134

b Limit of rating table; actual discharge greater.

Monthly Discharge of Canandaigua Outlet at Alloway
[Drainage area, 444 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	*b*1,031	80	178	0.401	0.462
February	862	248	407	0.917	0.955
March	*b*1,031	144	646	1.45	1.672
April	*b*1,031	934	1,024	2.31	2.577
May	*b*1,031	370	839	1.89	2.179
June	370	192	238	0.536	0.598
July	602	80	149	0.336	0.387
August	786	80	177	0.399	0.460
September	464	108	148	0.333	0.371
October	144	80	106	0.239	0.275
November	144	80	115	0.259	0.289
December	248	108	134	0.302	0.348
The year	*b*1,031	80	346	0.779	10.574

b Limit of rating table; actual discharge greater.

FLINT CREEK

DESCRIPTION

Flint creek is a tributary to Canandaigua outlet, entering the outlet at Phelps. Flint creek rises in northern Steuben county near the junction of the Ontario, Yates and Steuben county lines. It flows in general northeasterly, having a total length of 35 miles. The drainage basin is relatively long and narrow and the stream valley above Gorham, about 14 miles from the mouth, comprises a deep narrow valley bordered by steep and in some cases precipitous slopes, the bottom of the valley being relatively flat and having an average width of about one mile. The elevation of the valley is about 880 feet above tide. This valley is intermediate between and nearly parallel with Keuka and Canandaigua lakes, and it is apparently an unoccupied lake bottom of the finger lake series. Between the villages of Potter and Gorham the bottom of the valley is occupied by an extensive marsh, having a length of about 8 miles and an average width of one mile. Flint creek enters the head of this marsh at Potter and leaves the marsh at Gorham. Short lateral tributaries enter the marsh from the steep side slopes. The marsh is largely timber covered. There is a water-power dam at Gorham, which controls the level of Flint creek at the outlet from the marsh. Power is developed for small mills at Orleans, Flint, Stanton and other places. Above the head of Gorham marsh the sides of the stream valley rise to a height of 800 to 1,000 feet above the stream. The valley slopes are generally round and not serrated, as in the case of most of the other slopes bordering finger lake valleys, and there are but few permanent tributaries to upper Flint creek.

FLINT CREEK AT PHELPS

A gaging station was established on Flint creek at a private highway bridge located about one-quarter mile south of Phelps Junction, on August 5, 1910, by this Department. Readings are taken each morning and night from a standard weight-and-chain gage located on the downstream side of the bridge. The stream channel is fairly straight and uniform above and below the gage, but the bed of the stream is rock and contains some loose boulders, especially near the margins of the stream.

The datum of the gage is referred to an arbitrary bench-mark, elevation 100.00, on the downstream side of the right-hand abutment. The elevation of water-surface, when the gage reads zero, is 95.86.

Daily Gage Height, in Feet, of Flint Creek at Phelps

1910	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	......	......	......	......	0.75	0.68	0.80	1.08
2	......	......	......	......	......	......	......	......	0.72	0.65	0.82	1.08
3	......	......	......	......	......	......	......	......	0.75	0.65	0.78	1.15
4	......	......	......	......	......	......	......	......	0.80	0.68	0.85	0.98
5	......	......	......	......	......	......	......	0.65	0.85	0.72	0.88	1.20
6	......	......	......	......	......	......	......	0.70	1.57	0.85	0.82	1.18
7	......	......	......	......	......	......	......	0.65	1.40	0.92	0.78	1.20
8	......	......	......	......	......	......	......	0.65	1.12	0.82	0.75	1.20
9	......	......	......	......	......	......	......	0.60	0.98	0.72	0.75	1.30
10	......	......	......	......	......	......	......	0.78	0.90	0.70	0.92	1.08
11	......	......	......	......	......	......	......	0.85	0.88	0.72	0.88	0.95
12	......	......	......	......	......	......	......	0.75	0.98	0.70	0.90	1.00
13	......	......	......	......	......	......	......	0.72	1.00	0.70	0.85	1.05
14	......	......	......	......	......	......	......	0.68	0.85	0.70	1.12	1.15
15	......	......	......	......	......	......	......	0.65	0.82	0.70	1.08	1.05
16	......	......	......	......	......	......	......	0.62	0.92	0.72	1.10	1.00
17	......	......	......	......	......	......	......	0.60	1.08	0.70	0.82	0.92
18	......	......	......	......	......	......	......	0.60	0.85	0.78	1.00	0.90
19	......	......	......	......	......	......	......	0.78	1.00	0.80	1.00	1.00
20	......	......	......	......	......	......	......	0.72	1.02	0.82	0.92	0.92
21	......	......	......	......	......	......	......	0.68	0.75	0.82	0.98	0.98
22	......	......	......	......	......	......	......	0.70	0.92	0.90	1.05	1.10
23	......	......	......	......	......	......	......	0.65	0.92	0.90	0.95	1.00
24	......	......	......	......	......	......	......	0.60	0.78	0.92	0.98	1.08
25	......	......	......	......	......	......	......	0.58	0.75	0.98	1.00	0.95
26	......	......	......	......	......	......	......	0.60	0.70	0.88	0.95	0.90
27	......	......	......	......	......	......	......	0.58	0.72	0.80	0.85	1.00
28	......	......	......	......	......	......	......	0.55	0.70	0.75	1.05	1.05
29	......	......	......	......	......	......	......	0.55	0.68	0.75	1.08	1.12
30	......	......	......	......	......	......	......	0.50	0.70	0.78	1.05	1.02
31	......	......	......	......	......	......	......	0.50	......	0.80	......	1.05

Daily Gage Height, in Feet, of Flint Creek at Phelps

1911	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	1.08	1.55	3.65	2.50	1.80	1.05	1.00	0.98	0.82	0.95	1.35	1.45
2.....	1.35	1.62	3.70	2.35	1.85	1.05	0.92	0.90	0.82	1.08	1.25	1.52
3.....	1.45	1.62	3.50	2.30	1.75	1.05	0.88	0.82	0.80	0.92	1.25	1.48
4.....	1.15	1.88	3.00	2.22	1.70	1.05	0.88	0.78	0.85	1.10	1.28	1.45
5.....	1.10	1.85	2.95	2.88	1.70	1.08	0.98	0.75	0.82	1.10	1.08	1.52
6.....	1.12	1.68	2.50	2.68	1.70	1.02	0.88	0.78	0.95	1.02	1.42	1.42
7.....	1.28	1.60	2.40	2.60	1.70	1.05	0.88	0.78	1.05	1.20	1.30	1.45
8.....	1.32	1.60	2.25	2.40	1.72	0.95	0.85	0.78	1.12	1.00	1.38	1.38
9.....	1.18	1.52	2.15	2.70	1.72	1.05	0.90	0.75	1.10	1.18	1.30	1.42
10.....	1.18	1.52	2.90	2.75	1.60	1.02	0.85	0.75	0.90	1.12	1.38	1.40
11.....	1.20	1.45	2.92	2.55	1.55	1.00	0.85	0.82	1.08	1.10	1.30	1.45
12.....	1.25	1.42	2.95	2.40	1.50	1.18	0.88	0.82	1.08	1.15	1.28	1.50
13.....	1.42	1.40	2.85	2.20	1.48	1.20	0.82	0.75	0.92	1.20	1.30	1.72
14.....	1.45	1.42	2.92	2.20	1.42	1.22	0.80	0.72	0.92	1.08	1.25	1.65
15.....	1.28	1.45	2.92	2.20	1.38	1.05	0.78	0.72	1.00	1.02	1.18	1.68
16.....	1.25	1.42	2.35	2.05	1.35	1.08	0.75	0.78	1.08	1.25	1.30	1.65
17.....	1.22	1.55	2.68	2.00	1.30	1.10	1.05	0.72	1.00	1.10	1.30	1.75
18.....	1.18	2.75	2.52	1.90	1.38	1.02	1.08	0.70	1.12	1.22	1.35	1.68
19.....	1.20	2.85	2.30	1.90	1.35	1.08	1.05	0.70	0.98	1.18	1.50	1.72
20.....	1.32	2.75	2.25	1.88	1.35	1.18	1.00	0.70	1.08	1.22	1.42	1.88
21.....	1.32	2.50	2.22	1.88	1.25	1.12	0.90	0.70	1.15	1.15	1.42	1.92
22.....	1.28	2.10	2.32	2.10	1.20	1.15	0.82	0.62	1.08	1.12	1.42	1.92
23.....	1.28	2.08	2.30	2.15	1.12	1.02	0.80	0.60	1.18	1.28	1.62	1.90
24.....	1.35	2.10	2.18	2.02	1.12	1.02	0.85	0.55	0.90	1.22	1.45	1.82
25.....	1.32	2.25	2.25	1.92	1.22	1.02	0.90	0.68	0.95	1.28	1.38	1.80
26.....	1.32	3.00	2.30	1.88	1.00	1.02	1.00	0.75	1.10	1.05	1.38	1.78
27.....	1.65	3.95	2.75	1.80	1.05	1.02	0.98	0.80	1.08	1.12	1.45	1.82
28.....	2.35	3.60	2.78	1.80	1.08	1.15	0.85	0.85	0.95	1.10	1.50	1.42
29.....	1.88	......	2.60	1.82	1.02	1.02	0.85	1.10	1.20	1.10	1.55	1.30
30.....	1.80	......	2.62	1.75	1.00	1.08	0.85	1.12	1.05	1.22	1.68	1.92
31.....	1.55	......	2.70	......	1.18	......	0.82	0.92	......	1.20	......	2.12

Daily Gage Height, in Feet, of Flint Creek at Phelps

1912	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	1.82	2.02	3.70	4.05	2.22	1.78	1.12	1.00	1.15	1.48	1.35	1.75
2.....	1.80	2.05	4.00	3.98	2.12	1.72	1.18	1.12	1.28	1.58	1.30	1.82
3.....	1.72	2.10	4.60	3.55	2.10	1.72	1.00	1.25	1.20	1.60	1.45	1.88
4.....	1.75	2.02	4.75	3.50	2.12	1.70	1.00	1.12	1.18	1.62	1.48	1.80
5.....	1.65	2.00	4.88	3.50	2.08	1.70	1.00	1.20	1.20	1.65	1.50	1.70
6.....	1.62	1.95	4.75	3.30	2.18	1.68	1.05	1.10	1.20	1.70	1.48	2.02
7.....	1.68	1.90	4.75	3.20	2.18	1.62	0.95	1.08	1.15	1.68	1.52	2.20
8.....	1.75	1.90	5.02	3.25	2.12	1.60	1.08	1.15	1.10	1.65	1.82	2.12
9.....	1.68	1.80	4.70	3.42	2.02	1.58	0.98	1.20	1.18	1.60	1.72	1.98
10.....	1.62	1.80	4.55	3.32	1.98	1.55	1.20	1.10	1.20	1.50	1.82	2.58
11.....	1.70	1.75	4.30	3.10	2.02	1.55	1.10	1.05	1.18	1.62	1.75	2.20
12.....	1.68	1.75	3.95	2.88	1.90	1.38	1.15	1.08	1.18	1.60	1.58	2.20
13.....	1.72	1.78	3.85	2.78	1.90	1.28	1.05	1.15	1.22	1.50	1.48	2.18
14.....	1.75	1.78	3.85	2.68	1.92	1.30	1.00	1.15	1.12	1.50	1.65	2.15
15.....	1.78	1.78	4.60	2.72	1.88	1.30	1.25	1.12	1.15	1.45	1.62	2.08
16.....	1.85	1.75	4.75	2.65	2.42	1.20	1.20	1.08	1.50	1.28	1.72	2.18
17.....	1.85	1.80	5.55	2.42	2.75	1.38	1.05	1.00	1.18	1.32	1.82	2.08
18.....	1.88	1.78	5.70	2.40	2.45	1.30	1.12	1.02	1.30	1.40	1.85	1.98
19.....	1.70	1.80	5.88	2.38	2.32	1.22	1.15	1.05	1.28	1.40	1.75	1.95
20.....	1.72	3.28	4.62	2.28	2.50	1.32	1.15	1.20	1.28	1.40	1.75	1.95
21.....	1.70	3.75	3.20	2.20	2.60	1.25	1.02	1.10	1.20	1.32	1.70	1.95
22.....	1.78	2.82	3.22	2.22	2.52	1.30	1.00	1.05	1.10	1.30	1.70	1.82
23.....	1.80	3.35	3.05	2.48	2.35	1.20	1.10	1.10	1.45	1.40	1.70	1.82
24.....	1.85	3.85	2.55	2.38	2.22	1.32	1.12	1.22	1.22	1.38	1.62	2.00
25.....	1.98	3.55	2.48	2.30	2.08	1.30	1.05	1.00	1.58	1.42	1.70	1.85
26.....	2.05	4.40	2.30	2.25	2.00	1.28	1.10	1.15	1.45	1.65	1.70	1.80
27.....	2.10	4.15	2.28	2.22	1.90	1.18	1.05	1.15	1.55	1.48	1.80	1.80
28.....	2.02	4.35	2.58	2.20	1.85	1.28	1.00	1.10	1.68	1.42	1.72	1.75
29.....	2.08	4.00	4.02	2.20	1.90	1.10	1.30	1.18	1.60	1.48	1.78	1.90
30.....	2.00	......	3.52	2.45	1.92	0.98	1.22	0.98	1.42	1.42	1.68	1.92
31.....	1.98	......	4.18	......	1.88	......	1.12	0.92	......	1.32	......	2.05

Daily Gage Height, in Feet, of Flint Creek at Phelps

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	2.02	2.20	2.15	3.30	3.52	1.90	1.45	1.20	1.02	0.55	1.60	1.85
2.....	2.05	2.15	2.05	3.05	3.32	2.30	1.45	1.20	0.92	0.45	1.30	1.85
3.....	2.25	2.18	2.05	2.98	3.00	2.15	1.35	1.20	0.88	0.15	1.28	1.75
4.....	2.52	2.12	2.02	3.05	2.78	1.98	1.48	1.22	0.75	0.00	1.40	1.70
5.....	2.78	2.08	2.02	2.98	2.62	1.90	1.48	1.20	0.72	0.00	1.50	1.78
6.....	2.85	2.18	1.92	2.85	2.48	1.92	1.48	1.15	0.58	0.00	1.38	1.78
7.....	2.88	2.18	1.92	2.85	2.40	1.92	1.38	1.10	0.50	0.00	1.35	1.80
8.....	2.95	2.22	2.00	2.90	2.25	1.95	1.40	1.10	0.40	0.00	1.38	1.75
9.....	2.98	2.05	3.02	2.82	2.12	1.80	1.32	1.08	0.10	0.00	1.60	1.62
10.....	3.18	2.00	3.90	2.70	2.15	1.80	1.30	1.08	0.00	0.00	1.82	1.62
11.....	3.35	2.02	3.70	3.05	2.10	1.78	1.32	1.10	0.00	0.00	1.40	1.65
12.....	3.62	2.05	3.40	2.95	2.00	1.72	1.32	1.08	0.00	0.00	1.55	1.65
13.....	3.25	2.08	3.45	2.78	1.90	1.70	1.32	1.05	0.00	0.00	1.50	1.82
14.....	2.98	2.18	3.32	2.70	1.85	1.68	1.30	1.02	0.00	0.00	1.48	1.82
15.....	2.82	2.35	3.25	2.62	1.82	1.62	1.38	0.95	0.00	0.00	1.62	1.82
16.....	3.05	2.25	2.92	2.55	1.90	1.70	1.30	0.88	0.00	0.00	1.62	1.68
17.....	3.72	2.20	2.82	2.50	1.82	1.55	1.25	0.82	0.00	0.00	1.60	1.52
18.....	4.00	2.12	2.75	2.40	1.82	1.60	1.25	0.72	0.00	0.00	1.62	1.45
19.....	3.65	2.28	2.72	2.48	1.85	1.58	1.20	0.65	0.00	0.00	1.75	1.45
20.....	3.72	2.28	2.60	2.35	1.85	1.60	1.30	0.48	0.00	0.55	1.88	1.62
21.....	3.70	2.35	2.58	2.25	1.85	1.58	1.30	0.20	0.00	1.42	1.88	1.68
22.....	3.68	2.32	2.42	2.18	1.90	1.42	1.28	*a*	0.95	1.42	1.88	1.60
23.....	3.42	2.15	2.30	2.22	2.02	1.52	1.25	*a*	1.02	1.58	1.85	1.80
24.....	3.08	2.02	2.48	2.15	2.00	1.45	1.28	*a*	1.05	1.30	1.95	1.90
25.....	2.90	2.05	4.10	2.08	1.80	1.48	1.25	*a*	1.02	1.28	1.90	1.75
26.....	2.78	2.12	4.65	2.10	1.78	1.58	1.22	*a*	1.02	1.38	1.85	1.70
27.....	2.72	2.08	5.65	2.12	1.92	1.82	1.20	*a*	1.02	1.42	1.90	1.78
28.....	2.65	2.02	4.90	2.85	2.18	1.62	1.20	*a*	0.92	1.48	1.85	1.70
29.....	2.38	......	4.60	3.75	2.15	1.48	1.25	1.12	0.80	1.40	1.88	1.65
30.....	2.42	......	4.25	3.25	1.98	1.45	1.20	1.00	0.65	1.45	1.82	1.85
31.....	2.28	......	3.70	......	1.92	......	1.20	1.00	......	1.40	......	1.90

a Water-surface below bottom of gage.

Daily Gage Height, in Feet, of Flint Creek at Phelps

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	1.78	3.62	2.28	4.02	2.58	1.98	1.45	1.32	2.35	1.55	1.40	1.55
2.....	1.75	3.68	2.40	4.12	2.48	1.95	1.48	1.32	2.28	1.45	1.50	1.58
3.....	1.70	3.48	2.32	3.95	2.40	1.85	1.50	1.45	2.72	1.40	1.47	1.72
4.....	1.70	3.50	2.32	3.70	2.42	1.98	1.45	1.38	2.38	1.35	1.50	1.58
5.....	1.78	3.28	2.42	3.58	2.68	1.98	1.40	1.32	2.22	1.45	1.48	1.52
6.....	1.72	3.22	2.40	3.42	3.42	1.88	1.42	1.25	2.08	1.45	1.42	1.58
7.....	1.72	3.10	2.30	3.38	3.02	1.88	1.35	1.25	1.92	1.40	1.42	1.55
8.....	1.68	2.70	2.20	3.85	3.48	1.88	1.28	1.28	1.85	1.45	1.45	1.52
9.....	1.80	2.85	2.15	3.52	3.60	1.92	1.40	1.30	1.80	1.48	1.52	1.65
10.....	1.80	3.22	2.12	3.52	3.25	1.88	1.30	1.28	1.75	1.42	1.45	1.65
11.....	1.80	3.20	2.15	3.60	3.05	1.88	1.48	1.30	1.75	1.40	1.48	1.62
12.....	1.85	3.12	2.20	3.42	2.98	1.80	1.30	1.30	1.75	1.42	1.48	1.65
13.....	1.80	3.02	2.32	3.20	4.00	1.70	1.32	1.25	1.80	1.40	1.52	1.58
14.....	1.78	2.90	2.45	3.10	3.52	1.68	1.38	1.28	1.78	1.25	1.47	1.55
15.....	1.80	2.75	2.62	3.02	3.68	1.52	1.40	1.35	1.70	1.38	1.55	1.62
16.....	1.92	2.58	3.08	3.78	3.55	1.35	1.38	1.30	1.75	1.45	1.52	1.70
17.....	2.00	2.65	3.88	3.42	3.32	1.48	2.72	1.28	1.68	1.48	1.48	1.60
18.....	1.88	2.45	4.28	3.28	3.02	1.42	1.85	1.38	1.68	1.38	1.52	1.68
19.....	1.95	2.38	3.72	3.30	2.82	1.60	1.42	1.50	1.60	1.50	1.65	1.82
20.....	1.98	2.45	3.62	3.22	2.65	1.55	1.38	1.45	1.62	1.48	1.55	1.92
21.....	1.98	2.35	3.60	3.10	2.52	1.38	1.42	1.95	1.65	1.40	1.58	1.90
22.....	1.82	2.28	3.68	2.95	2.40	1.55	1.38	2.18	1.60	1.48	1.52	1.82
23.....	1.90	2.12	4.20	2.88	2.28	1.58	1.38	1.78	1.60	1.38	1.50	1.95
24.....	1.95	2.12	4.55	2.72	2.22	1.52	1.32	2.52	1.55	1.48	1.65	2.08
25.....	1.88	2.15	4.90	2.70	2.15	1.42	1.40	1.98	1.58	1.40	1.65	2.02
26.....	1.80	2.18	5.75	2.88	2.02	1.45	1.35	1.68	1.42	1.48	1.52	2.10
27.....	1.92	2.12	4.42	2.90	2.00	1.45	1.35	1.85	1.48	1.48	1.35	2.02
28.....	2.00	2.15	4.98	2.80	2.12	1.50	1.30	2.00	1.40	1.40	1.55	2.08
29.....	2.85	......	4.78	2.70	2.02	1.55	1.32	2.32	1.42	1.35	1.45	2.08
30.....	3.85	......	4.60	2.68	2.02	1.48	1.28	2.30	1.52	1.48	1.62	2.10
31.....	3.55	......	4.30	......	1.95	......	1.30	2.08	......	1.45	......	2.18

GENESEE RIVER DRAINAGE BASIN

GENESEE RIVER

DESCRIPTION

Genesee river rises in Potter county, Pa., 8 or 10 miles south of the New York–Pennsylvania boundary, flows northwestward for about 32 miles by general course, then turns to the northeast and empties into Lake Ontario, 7 miles north of Rochester. The entire length of the stream, following bends, is about 135 miles and the drainage area is about 2,450 square miles.

In the 39 miles between Belmont, in central Allegheny county, and Portage, in southwestern Livingston county, the fall of the water-surface is 253 feet, an average of 6.4 feet per mile. At Portage the river plunges down in three magnificent falls and thence nearly to Mount Morris flows at the bottom of a deep gorge. From Mount Morris to Rochester the valley is broad and open and the stream is bordered by meadows subject to occasional overflow. At Rochester there is another abrupt descent over three heavy falls, amounting to about 260 feet within the city.

In the northern counties the surface is rolling, with long, easy slopes, except along the streams, which usually lie in deep ravines, hemmed in by steep banks. On the whole there is a gradual rise away from the lakes and in the upper half of the basin the country becomes rough and is broken by ridges, the summits of which attain elevations of from 2,000 to 2,500 feet above tide.

Precipitation is rather low, the average rainfall being about 35 inches, some 14 inches smaller than that of the upper Sacandaga.

The series of remarkable lakes tributary to the Oswego basin is continued westward into the basin of the Genesee and includes Conesus, Hemlock, Canadice, and Honeoye lakes. These lakes serve as natural reservoirs and have inlets draining considerable areas at their upper ends. The slopes adjacent to the lakes themselves are narrow and steep and are drained by gullies and torrential brooks. The area below the lakes is rolling and the soil is rich and extensively cultivated. The areas and elevations of these lakes are shown in the following table:

Areas and Elevations of Lakes in Genesee River Basin *

LAKE	Elevation	Water-surface area	Drainage area	Per cent, water-surface
	Feet	*Square miles*	*Square miles*	
Hemlock lake	896	2.8	46.8	6.12
Canadice lake	1,092	0.7	12.6	5.57
Honeoye lake	800	2.5	39.6	6.41

* These lake basins are shown on the Honeoye, Canandaigua, Naples and Wayland topographic atlas sheets of the United States Geological Survey, from which the area of Honeoye lake has been taken. Areas of Hemlock and Canadice lakes are from surveys of the Rochester water works.

Above all the private dams at Rochester the State formerly maintained a dam for diverting water to the Erie canal, and in the basin of Black creek, one of the upper tributaries of the Genesee from the west, are two reservoirs (Rockville and Cuba reservoirs), owned by the State, also used for the benefit of the Erie canal.

Cuba reservoir, on the Genesee–Allegheny divide, receives the drainage from a tributary area of 26.6 square miles. The storage volume is 454,000,000 cubic feet. The overflow from this reservoir enters Allegheny river. The storage water may be turned into the summit level of the abandoned Genesee Valley canal and thence into Genesee river.

Drainage Areas of Tributaries of Genesee River *

NAME OF STREAM	AREA IN SQUARE MILES		
	Tributary	GENESEE RIVER	
		Above tributary	Below tributary
Cryder creek	43.3	99.9	143.2
Chenunda creek	30.0	181.0	210.0
Dyke's creek	68.3	214.0	282.3
Vandermark creek	21.6	301.3	322.9
Knight's creek	22.3	323.9	346.2
Phillips creek	32.3	372.8	405.1
Vancampens creek	55.7	410.4	466.1
Angelica creek	82.1	481.1	563.2
White creek	15.9	569.2	585.1
Black creek	31.1	595.5	626.6
Crawford creek	11.8	637.6	649.4
Caneadea creek	63.3	651.0	714.3
Cold creek	41.0	745.3	786.3
Rush Creek	35.3	787.0	822.3
Wiscoye:			
East Coy creek	59.9	....	....
West Coy creek	48.7	833.6	942.2
Wolf creek	19.3	974.9	994.2
Silver Lake outlet	30.4	1,029.2	1,059.6
Coshaqua creek	82.0	1,059.6	1,141.6
Canaseraga creek	258.7	1,148.4	1,407.1
Beards creek	41.3	1,423.1	1,464.4
Conesus Lake outlet	88.8	1,555.5	1,643.9
Honeoye creek	262.6	1,675.9	1,938.5
Allen's creek	198.1	1,947.1	2,145.2
Black creek	211.8	2,168.5	2,380.0
Genesee river, total at mouth	....	....	2,445.6

* From an early report on Genesee river storage.

GENESEE RIVER AT ELMWOOD AVENUE, ROCHESTER

Location.— At the highway bridge known locally as Elmwood avenue bridge at the north end of South Park, 3½ miles above the center of the city of Rochester, 3¼ miles below the mouth of Black creek, and 7½ miles above the mouth of the river.

Records available.— February 9, 1904, to December 31, 1914. Fragmentary records before this period published in water-supply papers 24, 65 and 97.

Drainage area.— 2,360 square miles.

Gage.— Prior to 1910, a staff gage bolted to the downstream end of the first pier from the right-hand abutment was read once daily. From December, 1910, to September, 1914, gage heights recorded by a Gurley automatic water stage register in the pump house immediately below the bridge on the right-hand bank. Elevation of zero of gage, 506.80, Barge canal datum, and 245.591, Rochester city datum. Gage datum unchanged since installation of the station.

Control.— Gravel, smooth; considered permanent.

Discharge measurements.— Made from bridge at which the staff gage is located. Prior to 1904, measurements and elevations of water-surface taken in conjunction with the water flowing over and around Johnson–Seymour dam in the city of Rochester.

Winter flow.— Affected by ice for short periods, although as a rule the channel is open.

Accuracy.— Discharge rating curve well developed for all stages; published data considered good for periods of open water.

Coöperation.— Gage inspected by an employee of the Rochester Light & Railway Co. Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Genesee River at Rochester

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Jan. 9 [a]	W. S. Easterly	1.30	622
27 [b]	W. S. Easterly	1.63	928
Feb. 16 [a]	C. S. De Golyer	1.90	808
Dec. 21 [c]	R. M. Adams	1.38	508

[a] Backwater from ice. Measurement made from bridge and through ice.

[b] Backwater from ice. Measurement made through ice 200 feet below gage.

[c] Measurement made from ice 250 feet above gage.

Daily Elevation of Water-surface (B. C. Datum) of Genesee River at Elmwood Ave., Rochester

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	507.93	513.23	508.33	515.83	509.23	508.63	507.93	507.73	508.13	507.93	507.73	508.13
2	507.93	513.43	508.93	514.83	509.13	508.53	507.93	507.73	508.13	507.73	507.73	508.13
3	507.93	511.43	508.73	514.63	508.93	508.43	507.93	507.73	509.23	507.73	507.73	508.53
4	507.93	511.33	508.43	512.43	508.83	508.43	507.93	507.73	509.83	507.73	507.73	508.83
5	507.93	511.73	508.43	511.83	508.93	508.53	507.93	507.73	509.23	507.73	507.73	508.83
6	507.93	512.13	508.43	511.23	513.43	508.73	507.83	507.73	508.73	507.73	507.73	508.53
7	507.93	509.73	508.43	510.83	514.23	508.73	507.83	507.73	508.43	507.73	507.73	508.23
8	507.93	509.13	508.43	513.13	512.43	508.53	507.83	507.73	508.23	507.73	507.73	508.13
9	507.93	509.13	508.33	514.43	512.33	508.43	507.83	507.73	508.13	507.73	507.73	508.13
10	508.13	509.03	508.33	513.73	513.43	508.53	507.83	507.73	508.03	507.73	507.83	508.13
11	508.33	508.93	508.33	512.93	512.13	508.43	507.73	507.73	508.03	507.73	507.83	508.03
12	508.43	508.93	508.23	512.73	511.23	508.33	507.73	507.73	507.93	507.73	507.83	508.03
13	508.73	508.63	508.23	512.23	514.23	508.23	507.73	507.73	507.83	507.73	507.83	508.13
14	508.73	508.63	508.23	511.63	515.13	508.23	507.73	507.73	507.83	507.83	507.83	508.03
15	508.43	508.53	508.33	510.73	515.43	508.13	507.83	507.73	507.83	507.83	507.93	508.23
16	507.93	508.43	508.73	511.83	514.33	508.13	507.83	507.73	507.83	507.83	508.03	507.93
17	508.23	508.43	511.23	513.13	511.73	508.13	507.83	507.73	507.83	507.83	508.23	507.93
18	508.33	508.43	513.53	511.93	510.53	508.03	507.93	507.73	507.83	507.83	508.53	507.93
19	508.23	508.43	513.83	511.03	510.03	508.03	507.83	507.73	507.83	507.83	508.33	507.93
20	508.13	508.43	512.03	510.73	509.73	508.03	507.73	507.83	507.83	507.83	508.23	508.03
21	508.23	508.43	510.63	510.43	509.43	508.03	507.73	508.03	507.73	507.83	508.13	508.03
22	508.13	508.53	510.03	510.13	509.23	508.03	507.73	509.03	507.73	507.83	508.13	508.13
23	508.13	508.63	509.83	509.73	509.13	508.03	507.73	509.93	507.73	507.83	508.03	508.13
24	508.13	508.63	509.73	509.43	509.13	508.13	507.73	508.53	507.73	507.83	507.93	508.13
25	508.23	508.53	510.23	509.43	508.83	508.03	507.73	508.63	507.73	507.83	507.93	508.13
26	508.33	508.43	511.63	509.53	508.83	508.03	507.73	509.43	507.83	507.73	507.93	508.13
27	508.33	508.43	514.93	509.73	508.73	507.93	507.73	508.43	507.83	507.73	508.03	508.13
28	508.53	508.33	516.13	509.73	509.13	507.93	507.73	508.33	507.83	507.83	508.63	508.13
29	509.53	......	516.88	509.53	509.13	507.93	507.73	508.13	507.73	507.83	508.53	508.13
30	512.13	......	517.43	509.33	508.93	507.93	507.73	508.13	507.83	507.83	508.23	508.23
31	513.13	......	517.13	......	508.83	......	507.73	508.13	......	507.73	......	508.23

NOTE.— Staff gage is read once daily by this Department.

Daily Gage Height, in Feet, of Genesee River at Elmwood Ave., Rochester

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.26	6.60	1.74	9.40	2.60	2.03	1.24	1.00	1.42	1.11	1.06	1.50
2	1.20	6.60	2.23	8.30	2.47	1.93	1.23	.99	1.38	1.09	1.07	1.93
3	1.19	5.10	2.06	8.00	2.30	1.79	1.25	.99	2.10	.99	1.06	1.65
4	1.20	4.50	1.82	7.10	2.18	1.76	1.25	.98	3.15	1.03	1.03	1.49
5	1.26	5.20	1.77	5.50	2.27	1.84	1.21	.99	2.55	1.02	1.03	1.42
6	1.23	5.20	1.74	4.60	5.80	2.07	1.17	1.00	2.15	1.03	1.00	1.48
7	1.22	3.45	1.74	4.20	7.50	2.00	1.15	.98	1.79	1.03	1.03	1.97
8	1.20	1.75	1.69	5.60	6.30	1.84	1.14	.96	1.58	1.04	1.03	2.00
9	1.25	2.24	1.70	7.70	5.30	1.79	1.13	.96	1.45	1.03	1.03	1.73
10	1.51	2.38	1.68	7.20	6.60	1.86	1.11	1.00	1.36	1.02	1.03	1.47
11	1.59	2.35	1.67	6.40	5.80	1.78	1.10	.98	1.30	1.09	1.04	1.44
12	1.73	2.39	1.66	6.20	4.70	1.70	1.08	.98	1.22	1.05	1.05	1.40
13	2.12	2.13	1.61	5.80	6.90	1.59	......	.99	1.18	1.05	1.00	1.35
14	2.20	2.05	1.60	4.80	8.20	1.54	......	1.02	1.13	1.07	1.04	1.32
15	2.00	1.97	1.64	4.15	8.70	1.47	......	.98	1.13	1.08	1.10	1.48
16	1.34	1.85	2.28	4.70	8.00	1.46	1.09	.94	1.12	1.11	1.10	1.38
17	1.36	1.86	4.80	6.30	5.60	1.41	1.10	.97	1.10	1.10	1.10	1.21
18	1.66	1.86	6.60	5.60	4.05	1.39	1.09	1.00	1.10	1.08	1.07	1.18
19	1.64	1.78	7.10	4.60	3.30	1.37	1.08	1.02	1.08	1.08	1.12	1.27
20	1.53	1.85	5.90	4.05	3.05	1.36	1.02	1.15	1.05	1.10	1.30	......
21	1.50	1.98	4.50	3.80	2.80	1.36	.99	1.48	.99	1.13	1.43	1.38
22	1.58	1.91	3.60	3.55	2.55	1.37	1.03	2.35	1.00	1.15	1.72	1.42
23	1.49	1.90	3.20	3.30	2.41	1.38	1.03	2.06	1.02	1.14	1.53	1.51
24	1.46	1.91	3.10	3.05	......	1.39	1.01	1.80	1.01	1.13	1.43	1.44
25	1.60	1.80	3.40	2.80	......	1.37	1.04	2.20	.98	1.10	1.37	1.43
26	1.69	1.76	5.60	2.85	2.12	1.32	1.07	2.12	1.03	1.03	1.41	1.45
27	1.63	1.64	8.30	3.05	2.06	1.28	1.04	1.71	1.09	1.04	1.22	1.43
28	1.78	1.60	9.50	3.10	2.29	1.26	1.04	1.47	1.07	1.08	1.22	1.36
29	2.50	......	10.20	2.90	2.50	1.25	1.04	1.40	1.07	......	1.22	1.39
30	4.80	......	10.80	2.70	2.26	1.26	1.03	1.38	1.09	......	1.19	1.45
31	6.30	......	10.40	......	2.12	......	1.01	1.40	......	......	......	1.51

NOTE.— Discharge relation affected by ice, January 12 to 28, February 9 to March 16, and December 19 to 31, inclusive. Gage height is mean of 24 hourly gage heights for each day.

Daily Discharge, in Second-feet, of Genesee River at Elmwood Ave., Rochester

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	564	12,800	......	21,900	2,640	1,650	542	320	755	414	370	860
2......	500	12,800	......	18,200	2,410	1,490	532	313	705	396	378	1,490
3......	490	8,400	......	17,200	2,100	1,270	554	313	1,760	313	370	1,070
4......	500	6,800	......	14,300	1,900	1,230	554	306	3,670	344	344	846
5......	564	8,680	......	9,530	2,050	1,350	510	313	2,550	336	344	755
6......	532	8,680	......	7,060	10,400	1,710	470	320	1,840	344	320	833
7......	521	4,280	......	6,040	15,600	1,600	451	306	1,270	344	344	1,550
8......	500	1,210	......	9,820	11,900	1,350	442	292	970	353	344	1,600
9......	554	1,840	......	16,200	8,960	1,270	432	292	794	344	344	1,180
10......	874	1,930	......	14,600	12,800	1,380	414	320	680	336	344	820
11......	984	1,760	......	12,200	10,400	1,260	405	306	610	396	353	780
12......	970	1,520	......	11,600	7,320	1,140	387	306	521	362	362	730
13......	874	1,130	......	10,400	13,700	984	370	313	480	362	320	668
14......	742	1,010	......	7,590	17,800	914	362	336	432	378	353	633
15......	633	900	......	5,920	19,500	820	370	306	432	387	405	833
16......	564	742	......	7,320	17,200	806	396	278	423	414	405	705
17......	587	755	7,590	11,900	9,820	742	405	299	405	405	405	510
18......	970	755	12,800	9,820	5,670	718	396	320	405	387	378	480
19......	942	656	14,300	7,060	3,970	692	387	336	387	387	423	500
20......	794	742	10,700	5,670	3,480	680	336	451	362	405	610	*a*470
21......	755	914	6,800	5,070	3,000	680	313	833	313	432	768	500
22......	860	820	4,610	4,500	2,550	692	344	2,190	320	451	1,170	542
23......	742	806	3,770	3,970	2,300	705	344	1,700	336	442	900	644
24......	705	820	3,570	3,480	2,100	718	328	1,290	328	432	768	564
25......	887	680	4,180	3,000	1,900	692	353	1,930	306	405	692	554
26......	1,010	633	9,820	3,100	1,790	633	378	1,790	344	344	742	576
27......	928	500	18,200	3,480	1,700	587	353	1,150	396	353	521	554
28......	1,140	460	22,200	3,570	2,080	564	353	820	378	387	521	480
29......	2,460	......	24,600	3,190	2,460	554	353	730	378	*a*396	521	532
30......	7,590	......	26,800	2,820	2,030	564	344	705	396	*a*396	490	622
31......	11,900	......	25,300	......	1,790	......	328	730	......	*a*378	......	692
Mean...	1,380	2,970	6,660	8,680	6,560	982	403	652	765	381	487	760

NOTE. — Daily discharge, May 24, 25, and July 13 to 15, estimated by hydrograph. Daily discharge values given during the frozen periods, January 12 to 28, February 9 to 28, and December 19 to 31, are only approximate. Daily discharge determined from well-defined rating curve. *a* Estimated.

Monthly Discharge of Genesee River at Elmwood Ave., Rochester
[Drainage area, 2,360 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January....................	11,900	490	1,380	0.585	0.67	B
February....................	12,800	460	2,970	1.26	1.31	B
March....................	26,800	....	6,660	2.82	3.25	B
April....................	21,900	2,820	8,680	3.68	4.11	A
May....................	19,500	1,700	6,560	2.78	3.20	A
June....................	1,710	554	982	0.416	0.46	A
July....................	554	313	403	0.171	0.20	B
August....................	2,190	278	652	0.276	0.32	B
September....................	3,670	306	765	0.324	0.36	B
October....................	451	313	381	0.161	0.19	A
November....................	1,170	320	487	0.206	0.23	A
December....................	1,600	....	760	0.322	0.37	B
The year....................	26,800	278	2,551	1.08	14.67	

NOTE.— Mean discharge, March 1 to 16, estimated, 706 second-feet; December 19 to 31, estimated, 556 second-feet.

GENESEE RIVER AT JONES' BRIDGE, NEAR MT. MORRIS

Location.— At the highway bridge known as Jones' bridge, about 5 miles below the village of Mt. Morris, 6 miles by river above the village of Geneseo, 1¾ miles below the inflow of Canaseraga creek (coming in from the right), and about 1¾ miles above the mouth of Beads creek (coming in from the left).

Records available.— May 22, 1903, to April 30, 1906; August 12, 1908, to April 30, 1914. Station discontinued.

Drainage area.— 1,410 square miles.

Gage.— Chain, fastened to upstream side of highway bridge; read at about 6 A. M. and 6 P. M. daily to quarter-tenths.

Control.— Sandy clay; liable to shift, but measurements indicate that it has been fairly permanent in recent years.

Discharge measurements.— Made at all stages from foot bridge erected on the outriggers of the bridge.

Winter flow.— Discharge relation affected by ice during the winter months. Gage observations are suspended during this period and the flow determined by comparison with the flow of the Genesee at Rochester and at St. Helena.

Accuracy.— Discharge curve well developed and data as published for open water periods believed to be good.

No discharge measurements made during 1914.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Daily Gage Height, in Feet, of Genesee River at Jones' Bridge, near Mt. Morris

1914	Jan.	Mar.	April	1914	Jan.	Mar.	April
1	......	......	17.60	16	......	......	15.40
2	......	......	17.30	17	......	......	14.60
3	......	......	16.70	18	......	......	11.50
4	......	......	12.70	19	......	......	9.80
5	......	......	10.50	20	......	......	9.30
6	......	......	9.20	21	......	......	8.80
7	5.50	......	8.60	22	......	......	8.20
8	5.40	......	17.00	23	......	......	7.60
9	5.20	......	18.80	24	......	6.50	7.00
10	5.40	......	14.00	25	......	8.40	6.50
11	5.70	......	14.60	26	......	16.30	7.00
12	6.40	......	14.40	27	......	23.80	7.40
13	6.70	......	12.00	28	......	26.30	7.00
14	......	......	9.90	29	......	26.20	6.60
15	......	......	9.00	30	......	24.30	6.40
				31	......	22.60	......

NOTE.— Discharge relation affected by ice, January 1 to March 23, inclusive. Station discontinued April 30, 1914.

Daily Discharge, in Second-feet, of Genesee River at Jones' Bridge, near Mt. Morris

1914	Mar.	April	1914	Mar.	April
1	......	9,840	16	......	8,040
2	......	9,570	17	......	7,270
3	......	9,060	18	......	4,800
4	......	5,720	19	......	3,610
5	......	4,100	20	......	3,260
6	......	3,190	21	......	2,920
7	......	2,790	22	......	2,530
8	......	9,310	23	......	2,150
9	......	10,900	24	1,500	1,790
10	......	6,760	25	2,660	1,500
11	......	7,270	26	8,720	1,790
12	......	7,100	27	15,500	2,030
13	......	5,170	28	18,000	1,790
14	......	3,680	39	17,900	1,560
15	......	3,050	30	16,000	1,450
			31	14,300	......

NOTE.— Discharge determined from fairly well-defined rating curve.

Monthly Discharge of Genesee River at Jones' Bridge, near Mt. Morris
[Drainage area, 1,410 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
March	18,000	....	4,280	3.04	3.50	C
April	10,900	1,450	4,800	3.41	3.80	A

NOTE.— Mean discharge, March 1 to 22, estimated, 1,660 second-feet, from records of the Genesee at St. Helena and Rochester.

GENESEE RIVER AT ST. HELENA

Location.— At the steel highway bridge about 6 miles above the mouth of Silver Lake outlet (coming in from the left), 9½ miles above Canaseraga creek (coming in from the right), and 5½ miles below the village of Portageville and the site of the proposed storage dam of the State of New York Conservation Commission.

Records available.— August 14, 1908, to December 31, 1914.

Drainage area.—1,030 square miles. (From United States Geological Survey water-supply papers.)

Gage.— Chain, fastened to the upstream side of the bridge, middle span; read at about 7 A. M. and 6 P. M. daily to hundredths. Since August 24, 1911, an automatic recording gage, with intake pipe to the well a few feet downstream from the chain gage. In September, 1914, the intake pipe was extended about 27 feet to the first bridge pier from the left bank. Datum same as chain gage, but slope of water-surface makes readings different. Gage heights from recording gage used to hundredths.

Control.— Gravel and rocks; occasionally shifting.

Discharge measurements.— At high stages made from the bridge; at low and medium stages made either by wading or from the bridge.

Winter flow.— Relation between gage height and discharge usually but slightly affected by ice; determination of winter discharge considered good when frequent discharge measurements are made.

Accuracy.— Discharge rating curve well defined. Conditions for meter measurements good. Gage heights from automatic gage eliminate error from diurnal fluctuations in flow due to operation of mill above the station.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Genesee River at St. Helena

DATE	Made by	GAGE HEIGHT		Discharge
		Chain	Automatic	
1914		*Feet*	*Feet*	*Sec.-ft.*
Jan. 10	W. S. Easterly	3.00	2.92	544
28 [a]	W. S. Easterly	3.63	3.58	985
Feb. 14	C. S. De Golyer	2.82	2.80	389
Mar. 6 [b]	C. C. Covert	3.92	....	258
18	C. S. De Golyer	6.00	....	5,450
19	C. S. De Golyer	4.62	....	2,310
19	C. S. De Golyer	4.55	....	2,310
29	C. S. De Golyer	8.88	....	16,800
29	C. S. De Golyer	7.69	....	11,200
30	C. S. De Golyer	6.98	....	8,300
June 8 [c]	C. S. De Golyer	3.10	3.06	520
9 [d]	C. S. De Golyer	3.08	3.06	530
Aug. 6 [e]	C. H. Pierce	....	2.07	85
6 [f]	C. H. Pierce	....	2.07	83
20 [g]	C. S. De Golyer	2.72	2.68	285
25	C. S. De Golyer	3.83	3.78	1,220
Sept. 21 [h]	E. D. Burchard	2.31	2.28	134
25 [i]	E. D. Burchard	2.47	2.43	176
25 [i]	E. D. Burchard	2.42	2.37	151
26 [h]	E. D. Burchard	2.20	2.15	102
Nov. 7	C. S. De Golyer	2.31	2.28	125
Dec. 22	R. M. Adams	....	2.96	409

[a] Backwater from ice. Measurement made from bridge and through ice.
[b] Backwater from ice. Measurement made through ice 400 feet below bridge.
[c] Measurement made by wading 200 feet below gage.
[d] Measurement made by wading 100 feet below gage.
[e] Measurement made by wading 60 feet above gage.
[f] Measurement made by wading 45 feet above bridge.
[g] Measurement made by wading 150 feet below gage.
[h] Measurement made by wading opposite gage.
[i] Measurement made by wading one-quarter mile above gage.

Daily Gage Height, in Feet, of Genesee River at St. Helena

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	2.72	6.32	4.10	5.80	3.55	3.00	2.46	2.28	2.63	2.20	2.19	3.03
2......	2.75	4.95	3.96	6.90	3.40	2.86	2.44	2.06	4.18	2.20	2.35	3.45
3......	2.58	4.68	3.82	5.70	3.30	2.78	2.29	2.31	4.94	2.20	2.31	3.80
4......	2.58	5.80	3.88	5.20	3.25	3.25	2.32	1.92	4.07	2.19	2.31	3.44
5......	2.68	5.05	3.78	4.80	4.20	3.40	2.15	2.20	3.65	2.17	2.36	3.20
6......	2.76	4.30	3.58	4.60	7.30	3.10	2.35	2.10	3.22	2.15	2.21	3.04
7......	2.66	4.15	3.40	4.40	5.40	2.88	2.28	2.13	3.00	1.91	2.28	3.01
8......	2.72	3.78	3.65	7.70	4.90	3.00	2.28	2.13	2.83	2.24	2.24	2.89
9......	2.76	3.25	3.55	6.20	7.00	3.10	2.08	2.15	2.71	2.30	2.42	2.87
10......	2.98	3.20	3.60	5.50	5.80	2.84	2.28	2.15	2.62	2.14	2.40	2.88
11......	3.27	3.15	3.68	5.80	5.00	2.69	2.05	2.25	2.55	2.26	2.44	2.89
12......	3.26	3.08	3.58	5.90	6.00	2.63	2.16	2.20	2.51	2.33	2.48	2.68
13......	3.02	3.02	3.62	5.10	9.30	2.58	2.28	2.15	2.43	2.27	2.63	2.78
14......	3.11	2.82	3.55	4.70	6.90	2.50	2.09	2.15	2.46	2.18	2.86	2.72
15......	3.12	2.92	3.70	4.60	5.60	2.52	2.20	2.14	2.40	2.25	2.90	2.71
16......	3.26	2.95	4.05	6.90	5.00	2.46	2.31	2.12	2.34	2.27	3.33	2.68
17......	3.18	2.98	6.40	5.70	4.60	2.43	2.04	2.10	2.31	2.22	3.58	3.00
18......	3.05	2.91	6.30	5.00	4.30	2.40	2.22	2.16	2.20	2.21	3.29	3.10
19......	2.95	2.92	4.80	4.70	4.15	2.42	2.14	2.40	2.24	2.42	3.14	3.05
20......	3.11	2.82	4.30	4.35	3.85	2.56	2.29	2.75	2.23	2.51	3.05	2.98
21......	2.98	4.70	4.00	4.50	3.65	2.46	2.15	3.80	2.25	2.50	3.00	3.00
22......	2.96	4.35	3.90	4.30	3.50	2.52	2.09	3.64	2.23	2.46	2.86	3.00
23......	3.20	4.28	3.70	4.20	3.45	2.48	2.16	3.10	2.17	2.32	2.76	2.94
24......	3.26	3.95	3.60	3.90	3.30	2.38	2.25	3.57	2.22	2.34	2.74	3.00
25......	3.21	4.10	3.90	3.70	3.25	2.38	2.32	3.81	2.23	2.16	2.80	2.94
26......	3.32	3.92	7.40	3.90	3.20	2.45	2.21	3.19	2.23	2.36	2.86	3.10
27......	3.48	3.88	8.60	4.15	3.45	2.54	2.31	2.86	2.17	2.23	3.86	2.98
28......	3.70	3.82	3.90	3.90	3.70	2.36	2.32	2.70	2.31	2.30	3.52	2.96
29......	6.09	......	8.30	3.70	3.50	2.42	2.19	2.70	2.19	2.11	3.14	3.00
30......	7.73	......	7.10	3.70	3.40	2.41	2.20	2.71	2.25	2.32	3.00	3.30
31......	6.18	......	6.80	......	3.20	......	1.95	2.73	......	2.29	......	4.40

NOTE.— Gage height from chain gage during the following periods: January 10, 15, 27, 31; June 9 to August 6; December 12 to 31. Gage heights from the automatic gage for the remainder of the year. The intake pipe of the automatic gage well was covered with gravel January 31 to June 9, rendering the automatic record valueless. Discharge relation affected by ice January 1 to 28; February 21 to March 16; December 17 to 31, inclusive. Daily discharge given during these periods is only approximate.

Daily Discharge, in Second-feet, of Genesee River at St. Helena

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	317	5,940	548	4,920	910	450	176	122	260	115	108	508
2......	333	2,990	455	8,200	770	362	170	75	1,810	110	150	860
3......	250	2,450	372	4,670	680	317	125	130	3,290	110	138	1,250
4......	250	4,680	406	3,490	638	638	133	50	1,640	108	138	850
5......	296	2,990	349	2,700	1,720	770	92	102	1,080	104	154	640
6......	338	1,840	258	2,350	9,630	520	142	82	656	100	112	515
7......	287	1,710	178	2,020	3,940	373	122	96	485	61	130	492
8......	317	1,220	282	11,200	2,890	450	122	96	370	120	120	408
9......	338	666	237	6,000	8,550	520	79	100	300	135	173	396
10......	468	624	258	4,180	4,920	376	122	100	255	98	166	402
11......	773	586	297	4,920	3,080	290	74	122	224	125	180	408
12......	764	548	250	5,180	5,450	260	94	110	206	144	195	266
13......	556	480	268	3,280	19,000	236	122	100	177	128	260	317
14......	548	372	237	2,520	8,200	202	80	100	188	106	389	285
15......	514	430	306	2,350	4,420	211	102	98	166	122	415	280
16......	624	449	514	8,200	3,080	188	130	94	147	128	747	266
17......	586	469	6,590	4,670	2,350	177	72	90	138	115	998	......
18......	480	424	6,290	3,080	1,870	166	107	102	110	112	712	......
19......	418	430	2,700	2,520	1,650	173	90	166	120	173	592	......
20......	514	372	1,870	1,950	1,250	213	124	322	118	206	522	......
21......	437	360	1,440	2,180	1,020	176	92	1,250	122	202	485	......
22......	424	480	1,310	1,870	860	198	80	1,060	118	188	389	......
23......	586	480	1,070	1,720	815	183	94	560	104	141	328	......
24......	624	449	960	1,310	680	150	114	987	115	147	317	......
25......	586	548	1,310	1,070	638	150	133	1,260	118	102	350	......
26......	666	430	10,000	1,310	595	173	104	632	118	154	389	......
27......	850	406	15,400	1,650	815	206	130	389	104	118	1,330	......
28......	1,120	372	22,000	1,310	1,070	144	133	295	138	135	932	......
29......	5,960	......	13,900	1,070	860	163	100	295	108	92	592	......
30......	10,600	......	8,900	1,070	770	159	102	300	122	141	485	......
31......	5,680	......	7,860	......	595	......	57	312	......	132	......	......
Mean...	1,180	1,190	3,450	3,430	3,020	286	110	310	430	128	400	491

NOTE.— Daily discharge determined from well-defined rating curve. New rating curve used, beginning March 17, 1914. Estimated mean daily discharge, December 17 to 31, 471 second-feet.

Monthly Discharge of Genesee River at St. Helena
[Drainage area, 1,030 square miles]

1914	Discharge in Second-feet				Run-off	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January	10,600	250	1,180	1.15	1.33	B
February	5,940	360	1,190	1.16	1.21	B
March	22,000	178	3,450	3.35	3.86	A
April	11,200	1,070	3,430	3.33	3.72	A
May	19,000	595	3,020	2.93	3.38	A
June	770	144	286	0.278	0.31	B
July	176	57	110	0.107	0.12	B
August	1,260	50	310	0.301	0.35	A
September	3,290	104	430	0.417	0.47	A
October	249	48	128	0.124	0.14	A
November	1,450	123	400	0.388	0.43	A
December	....	266	491	0.477	0.55	C
The year	22,000	48	1,203	1.17	15.87	

CANADICE LAKE

DESCRIPTION

Canadice lake is tributary to Genesee river through Hemlock lake outlet and Honeoye creek. The area drained by the lake forms an irregular rectangle, the lake lying somewhat to the left of the longitudinal axis and the greater portion of the drainage being on the eastern slope. The western slope is narrow and precipitous. Bald hill rises from an altitude of 1,090 feet at the lake to 1,800 feet at the summit and has its axis parallel to the lake at an average distance of three-fourths of a mile from it. The lake has a water-surface area of 0.7 square mile and drains a total area of 12.6 square miles, 5.6 per cent of which is lake surface.

CANADICE LAKE OUTLET NEAR HEMLOCK

A weir was constructed at the outlet at the foot of the lake by the city engineer's department of Rochester, N. Y., in February, 1903. The entire yield of the drainage basin passes this weir.

A standard thin-edge weir with a five-foot crest and two end contractions is so arranged with needle-timbers at the ends that during high water the length may be increased to 14.96 feet with no end contractions. The weir crest stands three feet above the stream channel and is never submerged by backwater. There are two additional rectangular gates each one foot square, with three complete contractions and a fourth partial contraction at the bottom. The outflow from the lake above the weir is controlled by gates.

A reading of the depth on the weir is taken each morning and also for each change of the gates, the depth being read to hundredths and corrections being made by velocity of approach for the larger discharges. The discharge is calculated by the Francis formula. The record has been furnished by Frederick T. Elwood, city engineer, and John F. Skinner, principal assistant city engineer, of Rochester, N. Y.

Mean Monthly Water-surface and Monthly Discharge of Canadice Lake near Hemlock

[Drainage area, 12.6 square miles]

1914	Mean elevation of lake above low-water mark	DISCHARGE IN SECOND-FEET		RUN-OFF
		Mean	Per square mile*	Depth in inches on drainage area*
January	0.379	4.845	0.384	0.443
February	1.412	12.554	0.996	1.037
March	1.218	30.279	2.402	2.769
April	2.947	41.639	3.305	3.688
May	3.195	47.534	3.773	4.350
June	2.744	6.708	0.532	0.594
July	2.281	4.954	0.393	0.453
August	2.091	4.479	0.355	0.409
September	2.619	5.936	0.471	0.526
October	2.115	4.576	0.363	0.418
November	1.601	5.940	0.471	0.525
December	1.288	6.644	0.527	0.608
The year	1.991	14.687	1.166	15.820

* Computed by State Engineer.

NOTE.— As the outlet of the lake is controlled by gates, it is fair to state that the terminal water-surface for the year 1914 was 0.85 ft. higher than the year before, corresponding to a gain in storage of 24,672,600 cu. ft., or a discharge of 0.782 cu. ft. per sec. This correction, applied to the above mean for the year, gives 15,456 cu. ft. per sec.

NIAGARA RIVER DRAINAGE

GENERAL FEATURES

Niagara river connects Lakes Erie and Ontario. It receives the drainage from Tonawanda creek and adjacent smaller areas in New York.

NIAGARA RIVER

NIAGARA RIVER AT TONAWANDA CREEK, TONAWANDA

This station was established by this Department, January 23, 1905. The gage is located in the mouth of Tonawanda creek just below the right-hand end of the New York Central railroad draw bridge across Tonawanda creek below the State dam. A staff gage was first used, but on April 8, 1908, an automatic Frieze gage, making an eight day graph, was installed. This gage has a range of eight feet, between elevations 565.0 and 573.0. The automatic gage is checked weekly by reading the staff gage. Mean daily water-surface has been taken from the graph to the nearest tenth of a foot.

Daily Elevation of Water-surface (B. C. Datum) of Niagara River at Tonawanda Creek, Tonawanda

1905	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	......	567.50	567.00	566.15	566.90	567.10	567.40	567.40	567.40	......	567.50	566.00
2......	......	567.72	567.22	566.00	566.90	567.20	......	567.50	567.20	567.30	566.90	566.90
3......	......	567.43	567.37	566.15	566.10	567.20	567.30	567.50	......	567.20	567.50	......
4......	......	567.65	566.95	566.25	566.50	......	......	567.40	567.60	567.40	566.90	566.90
5......	......	......	......	566.61	566.50	567.20	567.50	567.40	567.73	567.10	......	567.10
6......	......	567.48	566.90	566.61	566.90	567.00	567.50	......	567.35	566.90	567.20	567.30
7......	......	567.50	566.82	566.64	......	567.80	567.60	567.50	567.35	567.00	566.90	567.10
8......	......	567.22	566.80	566.66	567.00	567.30	567.90	567.40	567.25	......	567.10	566.90
9......	......	567.60	566.90	......	567.67	567.40	......	567.40	567.20	567.00	567.20	566.70
10......	......	567.97	566.81	566.20	567.67	567.50	567.30	567.40	......	566.90	567.20	......
11......	......	567.65	567.03	566.20	566.80	567.60	567.50	567.40	566.95	567.20	567.30	567.50
12......	......	......	......	566.20	566.80	567.60	567.60	567.50	567.30	567.50	......	567.00
13......	......	567.72	566.70	566.35	566.95	567.60	567.60	......	566.95	567.40	567.10	566.90
14......	......	567.60	566.60	566.30	......	567.60	567.70	567.00	566.90	567.10	566.90	566.50
15......	......	567.85	566.50	566.40	567.20	567.50	567.60	567.60	567.10	......	567.50	566.30
16......	......	567.88	566.45	......	567.00	567.50	......	567.20	567.10	567.38	566.90	566.60
17......	......	568.00	566.40	567.05	567.40	567.50	567.80	567.30	......	566.70	566.90	......
18......	......	567.87	566.50	566.80	567.50	......	567.80	567.30	567.20	567.50	566.60	567.00
19......	......	......	......	566.75	567.60	567.70	567.80	567.50	567.20	566.70	......	566.70
20......	......	567.63	566.08	565.95	567.20	567.70	567.60	......	567.50	570.40	566.40	566.40
21......	......	567.32	566.22	566.10	......	567.70	567.50	567.70	567.30	567.50	566.40	567.00
22......	......	......	566.58	566.50	567.00	567.80	567.30	567.50	567.40	......	566.90	567.90
23......	567.40	567.10	566.45	......	567.20	567.20	......	567.40	567.30	567.50	566.90	566.90
24......	567.35	567.24	566.74	......	566.55	567.40	567.70	567.20	......	566.90	567.00	......
25......	566.80	567.25	566.48	566.55	567.10	......	567.60	566.90	567.00	566.50	566.80	......
26......	567.35	......	566.50	566.60	567.20	567.40	567.60	567.20	566.80	566.30	......	567.00
27......	568.00	567.28	566.75	566.50	567.10	567.60	567.50	......	567.30	567.20	566.70	566.80
28......	567.55	567.11	566.45	566.40	......	567.50	567.50	567.50	567.10	567.00	566.00	566.60
29......	......	......	566.48	566.50	567.20	567.50	567.50	567.60	567.00	......	567.20	567.60
30......	567.50	......	566.48	566.50	......	567.50	......	567.85	566.90	566.80	566.50	567.60
31......	567.42	......	566.48	......	567.00	......	567.20	567.30	......	566.90	......	......

Daily Elevation of Water-surface (B. C. Datum) of Niagara River at Tonawanda Creek, Tonawanda

1906	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	......	567.20	566.40	......	566.60	567.00	......	567.10	567.30	566.70	566.80	568.40
2.....	566.70	566.90	566.20	565.60	567.00	567.05	567.10	567.00	......	566.80	566.90	......
3.....	566.40	566.70	566.60	566.40	566.95	......	567.10	567.20	567.00	566.70	566.80	566.80
4.....	567.90	......	......	566.80	567.05	566.90	567.00	567.20	567.00	566.90	......	567.00
5.....	567.40	567.20	566.40	566.60	566.85	567.00	566.90	......	567.10	567.00	566.90	566.30
6.....	568.30	566.90	566.60	566.80	......	567.05	566.90	567.30	567.10	566.90	566.80	569.60
7.....	......	566.50	566.70	566.60	566.90	566.90	567.10	567.30	567.30	......	566.80	567.30
8.....	566.70	566.60	566.30	......	566.70	567.35	......	567.00	567.10	567.20	566.70	566.90
9.....	566.70	567.00	566.50	566.50	567.35	567.35	567.00	567.20	......	567.70	567.00	......
10.....	567.20	566.50	567.00	566.90	567.25	......	567.00	567.30	567.00	567.20	567.30	566.80
11.....	566.40	......	......	566.90	567.15	567.15	566.90	567.40	567.00	567.10	......	567.00
12.....	566.70	566.60	566.30	566.80	567.25	566.80	567.00	......	567.00	567.20	566.70	567.20
13.....	566.80	566.50	566.20	566.60	......	566.60	567.00	567.10	567.10	566.90	567.10	566.80
14.....	......	566.40	566.10	566.80	566.50	566.90	567.00	567.30	566.80	......	567.90	566.60
15.....	566.60	566.50	565.90	......	566.90	567.05	......	567.00	566.70	566.80	566.70	567.50
16.....	569.10	566.20	566.70	566.85	567.10	567.10	567.20	567.00	......	566.80	566.90	......
17.....	567.20	566.50	567.10	566.95	566.95	......	567.00	567.10	566.90	566.70	566.70	567.40
18.....	567.30	......	......	566.80	567.05	567.00	567.10	567.10	567.00	566.60	......	567.00
19.....	566.70	566.30	565.40	566.80	567.10	566.90	567.00	......	566.90	567.00	566.90	567.00
20.....	566.80	566.60	566.90	566.85	......	566.90	567.10	567.30	567.20	566.40	566.40	567.00
21.....	......	566.50	567.50	566.90	566.85	567.00	567.00	567.40	566.90	......	566.30	566.90
22.....	566.80	......	567.30	......	566.80	567.00	......	567.30	566.90	566.70	568.60	567.10
23.....	568.50	566.50	566.50	566.95	567.00	567.20	567.10	567.30	......	566.60	567.30	......
24.....	567.00	566.40	565.80	567.20	566.90	......	567.00	566.70	566.60	567.40	567.20	567.20
25.....	566.60	......	......	566.80	566.90	567.00	567.00	567.00	566.80	568.10	......	567.10
26.....	566.60	566.70	566.40	566.85	567.00	566.90	567.10	......	567.20	567.50	566.90	567.80
27.....	566.80	566.40	567.40	566.95	......	567.10	567.10	567.30	566.80	566.80	567.60	567.20
28.....	......	566.70	566.40	566.70	566.80	567.20	567.20	567.10	566.50	......	567.30	567.60
29.....	566.70	......	566.30	......	566.80	567.20	......	567.20	567.00	566.50	567.00	......
30.....	567.00	......	566.30	567.05	566.90	567.20	567.40	567.40	......	566.40	567.60	......
31.....	567.00	......	565.80	......	567.00	......	567.30	567.30	......	566.80	......	......

Daily Elevation of Water-surface (B. C. Datum) of Niagara River at Tonawanda Creek, Tonawanda

1907	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	567.70	566.80	567.80	567.00	567.20	567.40	567.10	......	......	567.40	567.50	......
2.....	566.60	567.10	568.60	567.10	567.20	......	567.70	......	567.50	567.40	567.60	567.00
3.....	567.20	569.70	......	567.10	567.30	567.50	567.40	567.70	567.30	567.60	......	566.80
4.....	568.30	567.00	567.80	566.90	567.50	567.50	......	......	567.50	567.80	567.70	566.20
5.....	567.80	566.70	567.80	567.20	......	568.60	567.50	567.50	567.60	567.60	567.70	566.90
6.....	......	567.20	566.80	567.20	567.20	567.90	567.60	567.80	567.60	......	567.50	566.90
7.....	567.20	566.90	566.90	......	567.20	567.60	......	567.70	567.60	567.70	567.80	567.10
8.....	567.50	567.00	566.80	567.30	567.00	567.60	568.00	567.50	......	568.10	567.80	......
9.....	567.50	566.90	566.90	567.20	567.30	......	567.70	567.40	567.70	567.90	567.90	566.70
10.....	568.90	......	......	567.50	567.40	567.40	567.50	......	567.40	568.20	......	566.80
11.....	567.50	566.90	566.80	567.50	567.40	567.40	567.60	......	568.00	567.60	567.60	567.40
12.....	567.00	567.10	566.50	567.30	......	567.50	567.30	......	567.60	567.70	567.70	567.00
13.....	......	566.90	566.50	567.20	567.50	567.40	567.50	......	567.70	......	567.90	566.40
14.....	567.50	567.20	567.10	......	567.50	567.60	......	......	567.80	567.60	567.80	565.10
15.....	567.10	567.50	567.40	567.40	567.40	567.40	567.50	......	......	567.50	567.70	......
16.....	566.40	566.40	566.80	567.80	567.50	......	567.80	......	567.80	567.50	567.60	567.60
17.....	567.10	......	......	567.50	567.40	566.70	567.70	567.70	567.60	567.40	......	567.10
18.....	567.30	566.70	566.90	567.40	567.40	567.20	567.50	......	567.40	567.50	567.70	567.20
19.....	567.10	567.75	567.20	567.50	......	567.20	567.50	567.50	567.60	567.60	566.80	567.40
20.....	572.30	566.60	566.90	567.50	567.50	567.20	567.60	567.50	567.80	......	566.70	......
21.....	568.00	566.70	566.80	......	567.50	567.20	......	567.40	567.70	567.50	567.50	......
22.....	567.60	566.90	566.90	567.60	567.50	567.20	568.00	567.40	......	567.90	567.10	......
23.....	567.40	567.20	566.90	567.60	567.30	......	567.90	567.50	567.60	567.80	567.60	565.30
24.....	567.50	......	......	567.50	567.10	567.20	567.90	567.70	569.00	567.60	......	566.80
25.....	567.60	567.00	566.80	567.10	567.10	567.50	567.80	......	568.10	567.40	566.70	567.00
26.....	567.50	566.50	566.90	567.60	......	568.00	567.90	567.50	567.50	567.50	568.30	567.20
27.....	......	567.40	567.00	567.50	569.60	567.80	567.80	567.40	567.40	......	567.10	566.80
28.....	568.10	567.90	567.00	......	567.70	567.80	......	567.40	......	567.40	567.10	566.90
29.....	568.10	......	567.20	567.20	567.60	567.60	567.90	567.40	......	567.40	567.10	......
30.....	567.50	......	567.30	567.20	567.30	......	567.90	567.50	567.70	567.50	566.50	568.20
31.....	567.60	......	......	......	567.00	......	567.90	567.50	......	567.50	......	568.50

Daily Elevation of Water-surface (B. C. Datum) of Niagara River at Tonawanda Creek, Tonawanda

1908	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	*a*	568.40	*a*	......	568.10	568.00	567.80	567.60	567.60	567.40	567.00	567.80
2.....	567.40	*a*	567.90	......	568.20	567.90	567.30	567.70	567.70	567.20	566.90	567.30
3.....	567.10	568.00	567.40	......	568.00	567.40	567.50	567.70	567.50	567.10	567.30	566.80
4.....	567.50	566.20	566.50	......	567.70	567.00	567.60	567.70	567.50	567.10	567.40	567.00
5.....	*a*	565.50	566.40	......	567.30	566.70	567.90	568.00	567.40	566.90	567.40	566.20
6.....	567.50	568.40	566.95	......	567.50	566.70	567.70	567.80	567.70	567.00	567.50	566.40
7.....	567.10	567.30	567.50	......	567.50	566.70	567.90	567.90	567.50	567.10	567.20	567.20
8.....	567.20	567.00	*a*	567.40	567.70	566.70	567.80	567.70	567.40	567.00	567.00	567.20
9.....	567.40	*a*	566.40	567.50	568.00	566.90	567.70	567.60	567.50	566.90	566.90	567.20
10.....	567.40	567.90	566.50	567.50	567.70	566.80	567.70	567.70	567.50	566.90	566.50	*b*
11.....	567.40	567.00	567.60	567.90	567.80	566.50	567.90	567.70	567.50	*a*	566.80	566.70
12.....	*a*	567.00	567.10	568.00	568.10	*b*	567.60	567.90	567.40	*a*	567.40	566.80
13.....	567.10	566.80	567.40	567.30	567.60	*b*	567.50	567.90	567.30	567.10	567.20	567.00
14.....	567.70	566.70	567.40	567.20	567.40	567.90	567.50	567.90	566.80	567.10	566.60	566.70
15.....	567.40	566.90	*a*	567.30	567.50	567.90	567.60	567.50	566.90	567.20	567.40	566.50
16.....	567.80	*a*	567.90	567.00	567.70	567.90	567.50	567.50	567.10	567.00	567.40	566.30
17.....	568.70	567.40	567.20	567.30	567.80	567.60	567.90	567.90	567.20	567.00	567.00	565.70
18.....	567.50	567.15	566.80	567.30	567.70	567.70	567.90	567.70	567.30	567.00	566.80	566.50
19.....	*a*	567.00	567.50	567.70	567.80	567.90	567.80	567.90	567.10	566.60	566.60	566.70
20.....	568.70	567.20	567.40	567.70	567.80	568.60	567.70	567.70	567.10	566.40	566.40	567.00
21.....	567.30	567.40	567.40	567.90	567.60	*a*	567.70	567.60	567.20	566.70	566.40	566.80
22.....	567.90	567.20	*a*	567.90	567.70	567.90	567.80	567.80	567.30	566.80	566.40	566.20
23.....	567.50	*a*	567.20	567.60	567.90	567.80	567.60	567.50	567.30	566.80	566.40	566.30
24.....	567.40	566.90	567.60	567.50	567.70	567.80	567.50	567.50	567.20	566.70	566.40	566.40
25.....	568.20	567.00	567.20	567.40	567.70	567.80	567.70	567.10	567.20	567.00	566.40	566.70
26.....	*a*	567.50	567.40	567.70	567.80	568.00	567.70	567.10	567.20	567.10	567.00	567.00
27.....	568.70	567.00	566.80	567.40	567.90	567.80	567.80	567.20	567.10	567.00	567.40	*a*
28.....	567.20	566.90	566.80	567.80	567.80	567.70	567.80	567.30	568.00	567.00	566.80	*a*
29.....	566.70	566.00	*a*	568.10	567.90	567.70	567.70	567.40	568.00	567.00	566.60	*a*
30.....	566.20	......	566.60	567.90	567.80	*a*	567.80	*a*	567.30	567.10	566.70	*a*
31.....	566.40	......	566.40	......	568.10	......	567.80	*a*	......	567.20	......	*a*

a No record. *b* Record doubtful.
January to March from staff gage. After April 8, from recording gage graph.

Daily Elevation of Water-surface (B. C. Datum) of Niagara River at Tonawanda Creek, Tonawanda

1909	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	*a*	566.4	*b*	566.5	567.3	567.4	567.6	567.2	567.4	567.1	566.3	566.5
2.....	566.8	567.5	*b*	566.4	568.0	567.4	567.5	567.1	567.4	566.9	566.8	566.3
3.....	566.7	567.5	*b*	566.6	567.3	567.4	567.5	567.3	567.2	566.8	566.8	566.5
4.....	566.3	567.0	*b*	566.5	567.2	567.3	567.4	567.4	567.3	566.7	566.6	566.0
5.....	566.1	566.3	*b*	566.5	567.1	567.5	567.5	567.4	567.3	566.6	566.4	*b*
6.....	566.5	567.5	*b*	566.5	567.1	567.3	567.5	567.3	*a*	566.7	566.3	*b*
7.....	566.1	566.2	*b*	568.0	567.2	567.2	567.4	567.4	*a*	566.7	566.2	*b*
8.....	566.3	566.2	*b*	567.4	567.1	567.1	567.5	567.4	*a*	566.7	566.4	*b*
9.....	566.4	566.2	*b*	567.4	567.2	567.2	567.4	567.5	*a*	566.7	566.0	*b*
10.....	*b*	567.5	*b*	567.3	567.2	567.3	567.4	567.3	*a*	566.8	566.3	*b*
11.....	*b*	568.1	*b*	566.7	567.4	567.5	567.4	567.3	566.9	566.8	566.3	*b*
12.....	*b*	567.5	*b*	566.6	567.4	567.6	567.5	567.3	566.9	566.0	566.4	*b*
13.....	*b*	*b*	*b*	566.6	567.4	567.5	*a*	567.3	566.8	567.9	566.1	*b*
14.....	*b*	*b*	*b*	566.6	567.4	567.7	*a*	567.3	566.6	567.4	566.3	*b*
15.....	*b*	*b*	*b*	566.4	567.3	567.5	*a*	567.5	566.7	566.9	566.6	*b*
16.....	*b*	*b*	*b*	566.6	567.4	567.5	*a*	567.3	566.5	567.4	566.2	*b*
17.....	566.5	*b*	*b*	566.7	567.4	567.6	567.6	567.3	566.6	567.0	568.0	*b*
18.....	566.9	*b*	*b*	566.6	567.5	567.7	567.9	567.3	566.0	566.7	566.7	*b*
19.....	567.4	*b*	*b*	566.8	567.4	567.7	567.4	567.5	566.3	566.5	566.9	*a*
20.....	566.9	*b*	*b*	566.4	567.3	567.6	567.3	567.4	566.5	566.3	566.9	*a*
21.....	566.9	*a*	*b*	566.5	567.3	567.5	567.3	567.1	566.4	566.6	566.8	*a*
22.....	566.9	*a*	*b*	566.9	567.3	*a*	567.3	567.2	566.5	567.1	566.4	*a*
23.....	566.3	*a*	*b*	566.8	567.4	*a*	567.5	567.3	566.6	566.0	566.9	*a*
24.....	566.4	*a*	*b*	566.6	567.5	*a*	567.5	567.3	566.5	566.3	566.8	*a*
25.....	566.7	*a*	*b*	566.8	567.2	*a*	567.7	567.3	566.4	566.5	566.7	*a*
26.....	566.4	*a*	*b*	566.5	567.1	567.5	567.5	567.4	566.3	566.8	566.6	*a*
27.....	566.6	566.7	*b*	566.7	567.4	567.6	567.3	567.1	566.5	566.8	566.6	*a*
28.....	566.2	566.7	566.7	566.6	567.7	567.5	567.3	567.2	566.9	566.6	566.7	*a*
29.....	565.8	......	566.6	565.8	567.6	567.4	567.4	567.4	567.3	566.5	566.3	*a*
30.....	566.1	......	566.6	567.0	567.4	567.5	567.3	567.2	567.5	566.4	566.5	*a*
31.....	566.2	......	566.6	......	567.4	......	567.3	567.3	......	*a*	......	*a*

a No record. *b* Record doubtful.

Daily Elevation of Water-surface (B. C. Datum) of Niagara River at Tonawanda Creek, Tonawanda

1910	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	*a*	*b*	*a*	566.5	566.9	567.3	566.9	567.0	566.5	*b*	566.3	567.3
2.....	*a*	*b*	*a*	566.4	566.9	567.2	566.9	566.9	566.5	565.7	566.6	*a*
3.....	*a*	*b*	*a*	566.3	567.1	567.1	567.0	566.9	567.0	565.6	566.0	566.5
4.....	*a*	567.3	*a*	566.4	567.1	566.9	566.6	567.2	566.7	565.8	566.1	566.3
5.....	*a*	*b*	*a*	566.4	567.1	566.8	566.7	567.3	566.8	565.8	566.4	565.7
6.....	*a*	*b*	*a*	566.4	567.2	567.1	566.8	*a*	567.2	565.8	566.9	565.5
7.....	*a*	*b*	*a*	567.0	567.0	567.2	566.9	*a*	566.9	*a*	566.7	566.5
8.....	*a*	*b*	*a*	566.8	*a*	567.2	566.9	*a*	566.9	*a*	566.4	*b*
9.....	*a*	*b*	*a*	566.6	*a*	566.9	566.9	*a*	566.9	*a*	566.3	*b*
10.....	*a*	*b*	*a*	566.5	567.2	566.8	566.9	*a*	566.7	*a*	566.5	*a*
11.....	566.8	*b*	*a*	566.3	567.1	566.6	566.9	*a*	566.6	*a*	566.9	*b*
12.....	566.9	*b*	*a*	566.3	567.2	567.2	566.8	*a*	566.7	*a*	567.5	*b*
13.....	*b*	*b*	*a*	566.4	567.0	567.1	566.9	566.8	566.6	*a*	567.6	*b*
14.....	565.5	*b*	*a*	566.3	567.1	567.0	566.9	566.9	566.5	*a*	567.5	*b*
15.....	566.6	*b*	*a*	566.2	567.1	567.0	566.9	566.8	566.7	566.5	567.7	*b*
16.....	566.8	*b*	*a*	566.2	566.9	567.0	566.8	566.8	566.6	566.5	567.7	*b*
17.....	566.9	*b*	*a*	566.2	567.1	567.0	566.6	566.8	566.6	566.3	567.7	*b*
18.....	567.0	*b*	*a*	566.3	567.6	567.3	566.7	566.9	566.6	566.3	567.7	*b*
19.....	566.7	*b*	566.7	566.6	567.1	567.3	566.9	566.9	566.2	566.3	*a*	*b*
20.....	*b*	*a*	566.7	566.5	567.0	567.0	566.9	566.9	566.3	566.1	*a*	*b*
21.....	*b*	*a*	566.7	566.5	567.0	566.9	567.0	566.8	566.3	565.9	*a*	*b*
22.....	567.6	*a*	566.7	566.5	566.9	566.9	567.0	566.8	566.1	*b*	*a*	*b*
23.....	*b*	*a*	566.5	566.6	567.2	566.9	566.9	566.9	566.2	*b*	*a*	*b*
24.....	*b*	*a*	566.6	566.6	567.0	566.8	567.9	566.9	566.9	*b*	*a*	*b*
25.....	*b*	*a*	566.6	566.7	567.1	566.8	567.2	567.0	567.2	*b*	*a*	*b*
26.....	*b*	*a*	566.4	566.7	567.2	566.8	567.0	567.0	566.7	*b*	567.3	*b*
27.....	*a*	*a*	566.1	566.8	567.1	566.9	567.0	566.8	567.3	*b*	566.7	566.7
28.....	566.7	*a*	566.2	566.7	567.1	566.9	566.9	566.7	567.0	*b*	567.1	566.0
29.....	*b*	......	566.2	566.7	567.1	566.9	567.0	566.3	566.9	566.4	567.9	565.9
30.....	*b*	......	566.3	566.5	567.2	566.9	567.1	566.3	566.9	566.7	567.9	566.2
31.....	*b*	......	566.5	......	567.2	......	567.0	566.7	......	566.5	......	*a*

a No record. *b* Record doubtful.

Daily Elevation of Water-surface (B. C. Datum) of Niagara River at Tonawanda Creek, Tonawanda

1911	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	566.4	565.9	566.3	565.6	566.4	566.7	566.4	566.2	566.3	565.8	565.9	566.7
2.....	*b*	*b*	566.2	565.6	566.8	566.4	566.4	566.3	566.0	565.5	566.3	566.5
3.....	566.6	565.7	565.9	564.0	566.5	566.3	566.3	566.3	565.7	565.7	566.3	565.6
4.....	566.4	566.5	565.9	564.4	566.3	566.2	566.3	566.3	565.6	567.1	565.2	566.2
5.....	567.5	566.3	565.9	564.9	566.3	566.4	566.3	566.3	565.6	566.2	565.3	566.7
6.....	566.5	*b*	565.4	564.9	566.3	565.8	566.4	566.3	565.8	565.6	565.8	566.4
7.....	566.3	566.1	*b*	564.9	566.3	565.4	566.3	566.3	565.3	565.4	566.8	566.2
8.....	565.9	566.0	565.6	565.2	566.3	*b*	566.5	566.3	565.5	566.0	565.9	566.1
9.....	567.4	566.0	565.5	565.6	566.3	*b*	566.8	566.3	565.8	566.0	565.8	566.2
10.....	566.3	566.3	565.6	565.5	566.2	566.3	566.9	566.3	565.9	566.0	566.2	566.1
11.....	566.0	566.0	565.7	565.2	566.4	566.3	*b*	566.3	565.9	566.1	566.0	566.3
12.....	565.6	565.9	565.9	565.1	566.4	566.3	*b*	565.9	565.9	566.1	567.2	566.3
13.....	566.0	565.7	565.9	565.4	566.3	566.4	566.7	565.9	565.7	565.9	567.6	566.3
14.....	565.9	565.4	565.9	565.7	566.2	566.4	566.7	565.9	565.8	566.0	566.4	566.2
15.....	566.2	565.5	566.6	566.7	566.3	566.3	566.5	566.1	566.2	566.1	566.9	566.3
16.....	566.2	565.8	566.8	566.6	566.2	566.3	566.5	566.1	566.3	566.0	566.4	566.4
17.....	565.9	565.7	565.9	566.1	566.2	566.3	566.7	566.1	566.2	566.2	566.0	566.8
18.....	565.9	565.9	565.9	565.9	566.3	566.4	566.7	566.2	566.2	566.1	568.4	566.5
19.....	566.4	565.7	565.9	565.5	566.2	566.4	566.6	566.3	566.3	566.1	567.6	566.9
20.....	566.6	565.5	566.1	565.7	566.2	566.5	566.5	566.3	566.3	566.1	566.5	566.0
21.....	566.0	566.1	565.8	565.8	566.3	566.4	566.5	566.1	566.2	566.0	566.4	566.2
22.....	565.9	566.3	566.1	565.6	566.3	566.5	566.5	566.3	566.2	566.3	566.3	566.3
23.....	566.0	566.3	566.1	565.8	566.3	566.2	566.5	566.2	566.1	566.8	566.5	566.8
24.....	566.2	566.2	565.8	565.9	566.4	566.1	567.4	566.0	566.1	566.5	566.5	566.5
25.....	565.6	566.1	565.8	565.9	566.2	566.3	567.5	566.1	566.2	566.0	566.7	566.6
26.....	565.6	565.9	565.7	565.9	566.1	566.3	566.5	566.1	566.0	565.9	566.8	566.2
27.....	*b*	566.1	565.4	565.7	566.3	566.5	566.2	566.1	566.4	565.9	566.2	567.3
28.....	566.1	565.9	565.7	565.8	566.3	566.3	567.2	566.3	565.9	566.0	566.8	567.7
29.....	566.0	......	565.0	565.9	566.3	566.3	567.5	566.1	566.4	566.4	566.8	566.5
30.....	566.4	......	565.0	565.9	566.3	566.4	567.5	565.8	566.0	566.1	567.4	566.2
31.....	565.8	......	565.3	......	566.4	......	567.3	566.1	......	565.9	......	566.2

b Record doubtful.

Daily Elevation of Water-surface (B. C. Datum) of Niagara River at Tonawanda Creek, Tonawanda

1912	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	567.6	566.8	*b*	567.1	566.8	567.2	566.6	567.1	567.2	567.2	567.2	566.4
2.....	566.8	566.3	*b*	567.3	566.9	567.3	566.8	567.1	567.1	567.1	566.8	567.2
3.....	566.5	566.6	*b*	567.5	566.9	567.2	566.9	567.1	567.1	567.2	566.9	566.7
4.....	567.2	566.9	*b*	567.3	566.7	567.3	566.9	567.1	567.1	567.0	567.1	566.8
5.....	568.0	566.9	*b*	567.5	566.6	567.1	566.9	567.0	567.2	566.8	567.1	566.4
6.....	*b*	566.8	*b*	567.0	566.8	567.1	566.9	566.9	567.2	566.9	566.6	567.3
7.....	*b*	566.9	*b*	567.0	566.8	567.1	566.9	566.9	567.2	567.0	566.6	567.2
8.....	*b*	*b*	*b*	566.9	566.9	567.1	566.9	567.0	567.2	566.8	566.6	567.6
9.....	*b*	*b*	*b*	566.9	567.1	567.1	567.0	567.0	567.2	566.8	566.9	568.0
10.....	*b*	567.1	567.0	566.6	566.9	567.1	567.1	567.3	567.1	566.6	566.8	567.9
11.....	*b*	*b*	*b*	566.6	566.8	567.1	567.0	567.2	567.1	566.7	566.8	567.1
12.....	*b*	*b*	*b*	566.4	566.8	567.2	567.0	567.2	567.1	567.2	566.9	*b*
13.....	*b*	*b*	*b*	565.9	567.5	566.8	567.1	567.1	567.0	567.0	567.1	*b*
14.....	567.0	*b*	566.7	566.4	567.0	566.8	567.1	567.3	567.1	567.0	567.4	*b*
15.....	567.4	*b*	566.8	566.4	566.8	567.1	567.2	567.1	567.0	567.0	566.9	566.4
16.....	567.5	*b*	566.9	566.6	566.7	567.2	566.9	567.1	566.9	566.7	566.9	566.4
17.....	567.5	*b*	566.8	566.3	567.1	567.1	566.9	567.0	566.9	566.9	567.2	566.3
18.....	567.1	*b*	567.1	566.5	567.2	567.2	567.0	567.1	567.1	566.7	566.6	566.3
19.....	567.1	*b*	567.1	566.8	*b*	567.1	567.1	567.1	567.4	566.9	567.1	566.7
20.....	567.2	*b*	567.0	566.7	*b*	567.3	567.0	567.1	567.2	566.5	566.7	566.6
21.....	567.3	*b*	567.0	566.6	567,1	567.1	567.1	567.2	566.8	566.5	566.9	566.8
22.....	567.0	567.2	567.3	566.8	567.0	567.1	567.0	567.2	567.1	566.6	567.0	567.0
23.....	566.7	*b*	566.9	567.2	567.1	567.1	566.9	566.9	566.9	568.6	566.6	566.5
24.....	566.9	*b*	566.9	567.0	567.2	567.1	566.9	566.7	566.9	568.7	567.0	566.4
25.....	566.7	*b*	567.0	566.9	567.2	567.1	567.0	566.8	567.0	568.7	567.3	566.5
26.....	566.5	*b*	567.1	566.8	567.1	567.0	567.1	566.7	567.2	568.8	567.4	566.7
27.....	566.3	567.1	567.1	567.4	567.0	567.8	567.1	566.5	567.1	567.0	567.3	566.4
28.....	566.3	567.0	567.0	566.8	567.1	567.1	567.2	566.5	567.1	566.8	566.8	567.0
29.....	566.4	*b*	567.2	566.4	567.1	567.1	567.3	566.4	566.8	566.8	567.3	567.4
30.....	566.5	......	567.1	566.7	567.1	566.4	567.2	566.4	567.3	567.2	566.5	566.2
31.....	566.4	......	567.3	......	567.1	......	567.0	567.0	......	566.6	......	566.4

b Record doubtful.

Daily Elevation of Water-surface (B. C. Datum) of Niagara River at Tonawanda Creek, Tonawanda

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	566.2	*b*	566.7	568.1	567.8	567.9	567.8	567.6	567.3	566.8	*a*	566.5
2.....	566.2	*b*	567.9	567.4	567.8	567.8	567.7	567.7	567.2	567.1	567.2	566.5
3.....	566.9	*b*	567.3	567.1	567.8	567.8	567.7	567.7	567.3	567.0	567.0	566.5
4.....	567.8	*b*	566.6	567.1	567.9	567.8	567.6	567.4	566.7	567.0	567.1	566.9
5.....	566.2	*b*	566.8	568.5	567.9	567.8	567.9	567.5	567.0	566.9	566.8	566.9
6.....	566.8	569.0	567.2	568.2	567.9	567.8	568.2	567.5	567.0	566.9	566.7	566.5
7.....	565.7	569.0	566.8	567.6	567.9	567.9	568.1	567.4	567.2	566.8	566.7	567.0
8.....	566.3	569.0	566.9	567.3	567.8	567.6	567.8	567.5	567.3	566.8	566.7	567.6
9.....	566.3	567.0	566.9	567.0	567.9	567.7	567.9	567.6	566.8	566.8	566.9	567.2
10.....	566.5	566.0	566.4	567.1	567.8	567.9	567.8	567.6	566.9	566.8	568.1	567.6
11.....	566.6	566.5	566.6	567.5	567.8	567.9	567.6	567.0	567.0	567.1	567.6	*a*
12.....	566.9	566.5	566.6	567.6	567.8	567.9	568.2	567.3	567.1	567.1	567.1	*a*
13.....	566.6	566.3	566.5	567.6	567.9	567.9	568.1	567.4	567.4	566.9	567.1	*a*
14.....	566.6	566.4	566.6	567.5	567.6	567.7	567.6	567.4	567.0	566.8	566.9	566.9
15.....	566.8	566.8	566.7	567.4	567.4	567.8	567.5	567.4	566.8	566.8	566.7	566.7
16.....	566.7	566.6	567.0	567.6	567.8	567.7	567.4	567.4	567.0	566.7	566.7	567.1
17.....	566.9	566.6	567.0	567.6	567.6	567.7	567.4	567.4	567.2	566.6	567.2	567.1
18.....	567.1	566.7	566.6	567.7	567.9	567.5	567.6	567.4	567.0	567.1	567.1	566.7
19.....	567.1	566.7	566.6	567.7	567.9	567.6	567.7	566.9	566.9	566.5	567.0	566.7
20.....	567.2	566.5	566.5	567.6	567.7	567.7	567.6	567.0	566.9	566.9	567.0	566.7
21.....	567.3	566.0	567.0	567.4	567.7	567.7	567.6	567.3	567.3	567.5	566.9	566.5
22.....	567.3	567.0	567.9	567.3	567.9	567.7	567.6	567.5	567.4	566.8	566.7	566.3
23.....	567.3	567.2	567.3	567.6	567.9	567.7	567.6	567.6	567.2	566.8	566.9	566.2
24.....	567.2	566.5	567.3	567.5	567.9	567.7	567.6	567.5	567.0	566.6	567.2	566.6
25.....	567.2	566.6	566.6	567.2	567.8	567.7	567.6	567.4	567.0	*a*	567.0	566.1
26.....	567.4	566.9	566.1	567.6	567.4	567.8	567.5	567.6	567.1	*a*	566.9	*a*
27.....	567.2	566.1	566.4	568.0	567.5	567.8	567.5	567.4	567.1	*a*	566.2	*a*
28.....	567.0	566.9	567.4	567.8	567.9	567.7	567.6	567.2	566.9	*a*	566.5	566.6
29.....	567.0	......	567.2	567.8	567.8	567.6	567.6	567.6	566.9	*a*	566.3	566.8
30.....	567.0	......	567.2	567.8	567.7	567.7	567.6	567.4	566.7	*a*	566.4	*a*
31.....	567.7	......	567.7	......	567.9	......	567.5	567.3	......	*a*	......	*a*

a No record. *b* Record doubtful.

Daily Elevation of Water-surface (B. C. Datum) of Niagara River at Tonawanda Creek, Tonawanda

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	566.0	567.5	566.2	566.3	566.7	567.3	567.1	567.0	567.2	566.4	566.7	566.1
2	566.2	567.8	566.8	566.7	566.8	567.3	567.1	566.9	567.3	566.4	566.6	566.1
3	566.2	566.6	566.8	566.5	566.7	567.2	567.1	566.7	567.5	566.4	566.5	566.1
4	565.5	566.6	566.6	566.7	566.7	567.1	567.0	566.7	567.3	566.5	566.8	565.4
5	565.9	566.1	566.3	566.6	566.7	567.1	567.1	566.7	567.0	566.5	566.9	565.0
6	566.7	566.0	566.3	566.3	566.9	567.1	567.1	566.8	567.3	566.4	566.5	565.1
7	566.9	568.0	566.4	566.3	566.9	567.3	567.1	566.9	567.2	566.4	566.3	565.2
8	566.5	568.6	566.4	566.6	566.7	567.3	567.0	566.8	567.0	566.4	566.3	565.3
9	566.5	568.2	566.4	567.2	567.0	567.3	567.0	566.9	566.8	566.5	566.2	565.4
10	567.0	566.9	566.5	566.7	567.0	567.3	567.1	566.9	566.9	566.6	566.2	565.7
11	567.0	566.7	566.2	566.9	566.6	567.3	567.2	567.0	566.5	567.3	566.5	566.0
12	568.0	*a*	566.3	566.9	566.3	567.4	567.1	566.8	566.7	566.8	566.2	566.2
13	*a*	*a*	566.2	566.5	567.0	567.3	567.0	566.9	566.7	566.0	567.1	566.2
14	566.6	*a*	566.4	566.5	567.3	567.1	567.0	567.0	566.7	566.0	565.8	567.2
15	566.8	566.4	566.2	566.4	567.2	567.3	567.1	567.1	566.8	566.5	566.7	567.5
16	566.5	566.5	566.3	566.5	567.3	567.2	567.1	566.9	566.8	566.3	*a*	566.9
17	566.6	566.7	566.4	566.6	567.2	567.2	567.3	567.0	566.8	566.6	*a*	566.6
18	566.9	566.6	566.6	565.5	567.2	567.2	567.3	567.0	566.7	566.4	*a*	566.3
19	566.6	566.5	566.7	566.6	567.2	567.2	567.2	566.9	566.7	566.4	*a*	566.4
20	566.4	566.6	566.5	566.9	567.2	567.2	567.1	566.8	566.8	566.4	*a*	566.0
21	567.0	566.7	566.4	566.9	567.2	567.2	567.2	567.0	566.8	566.5	*a*	566.4
22	566.9	566.7	566.2	566.7	567.2	567.2	567.0	567.0	566.8	566.3	566.7	567.5
23	566.8	566.8	566.3	566.2	567.3	567.2	567.2	567.1	566.9	566.2	566.2	567.2
24	566.5	566.2	566.1	566.1	567.1	567.3	567.0	567.1	566.9	566.2	566.3	566.5
25	566.7	566.4	566.1	566.3	567.2	567.3	567.1	566.9	566.8	566.4	566.5	565.9
26	566.7	566.4	566.3	566.7	567.2	567.1	567.1	566.6	566.9	566.6	566.6	566,3
27	566.5	566.2	566.3	566.8	567.3	566.9	567.0	566.8	566.9	566.5	566.2	567.0
28	566.4	566.4	566.0	566.6	567.2	567.3	566.7	566.7	566.5	567.2	565.8	566.6
29	566.7	......	566.3	566.6	567.2	567.6	566.7	566.9	566.7	566.6	565.9	566.6
30	566.8	......	566.3	566.7	567.3	567.3	566.8	567.3	566.6	566.6	566.0	566.5
31	567.2	......	566.2	......	567.3	......	566.9	......	......	566.3	......	566.2

a No record.

TONAWANDA CREEK

DESCRIPTION

Tonawanda creek rises in Wyoming county and flows northward into Genesee county. At Batavia it turns abruptly to the west and continues in that direction until it reaches the Niagara river at Tonawanda. After passing out of Genesee county it forms the boundary between Niagara county and Erie county.

Tonawanda creek rises in a rather hilly country and, in the upper part of its basin, flows through a rather narrow valley. Its main tributary is Little Tonawanda creek, which flows into the stream from the right about 3 miles south of Batavia.

TONAWANDA CREEK AND ERIE CANAL WATER-SURFACE RECORDS

Between Pendleton and Tonawanda the creek and the Erie canal are coincident, the creek leaving the canal over the State dam at Tonawanda.

Daily Elevation of Water-surface (B. C. Datum) of Erie Canal above State Dam at Tonawanda

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	*a*	*a*	*a*	572.30	568.00	570.90	570.50	570.00	570.70	570.20	570.20	571.20
2.....	567.00	572.50	570.40	572.70	568.00	570.50	570.40	*a*	571.10	570.10	570.30	571.20
3.....	566.60	570.30	569.10	573.10	*a*	570.40	570.30	569.90	571.20	570.10	570.00	571.20
4.....	*a*	571.40	568.80	572.60	567.50	570.50	570.20	569.70	571.20	*a*	570.10	571.00
5.....	567.00	571.20	569.20	*a*	568.30	570.30	*a*	569.50	571.10	570.50	570.60	570.70
6.....	567.00	570.70	569.50	571.40	569.70	570.30	570.40	569.40	*a*	570.60	570.40	570.70
7.....	567.60	570.90	569.50	570.80	570.80	*a*	570.30	569.30	*a*	570.30	569.90	570.70
8.....	566.90	*a*	*a*	571.80	571.00	570.40	570.20	569.40	571.10	570.40	569.90	570.70
9.....	567.00	571.50	570.50	572.00	570.70	570.60	570.20	*a*	570.70	570.40	570.00	570.60
10.....	567.50	570.70	570.50	571.80	*a*	570.50	570.10	569.50	570.50	570.40	569.80	570.80
11.....	*a*	570.80	569.40	572.10	571.00	570.50	570.00	569.60	570.50	*a*	569.90	570.90
12.....	569.00	*a*	569.20	*a*	570.70	570.40	*a*	569.20	570.30	*a*	570.00	571.00
13.....	568.00	570.80	569.10	571.60	570.80	570.30	570.00	569.40	*a*	570.40	570.30	571.00
14.....	567.50	570.40	568.80	571.30	571.20	*a*	570.00	569.80	570.30	569.70	569.40	571.20
15.....	568.10	*a*	*a*	571.10	571.50	570.30	570.00	570.20	570.30	570.00	569.20	571.30
16.....	567.70	570.20	569.40	570.90	570.90	570.20	570.00	*a*	570.30	570.00	570.30	571.10
17.....	568.90	570.20	571.40	570.60	*a*	570.10	569.90	570.70	570.20	570.10	569.60	570.50
18.....	*a*	570.20	573.10	570.70	570.70	570.10	570.00	570.10	570.30	*a*	569.40	570.30
19.....	570.70	570.10	572.40	*a*	570.60	570.00	*a*	570.30	570.30	570.50	569.30	570.30
20.....	570.20	569.90	572.00	569.80	571.30	569.90	570.10	570.40	*a*	570.40	568.80	570.60
21.....	570.30	570.00	571.80	569.90	571.40	*a*	569.90	570.50	570.30	570.40	569.10	570.20
22.....	570.40	*a*	*a*	570.10	571.30	570.20	569.60	570.70	570.40	570.50	569.70	570.50
23.....	570.30	570.00	570.70	570.10	571.20	570.10	569.80	*a*	570.30	570.30	569.60	569.70
24.....	570.30	570.00	570.30	570.00	*a*	570.20	569.80	571.20	570.90	570.30	569.30	569.60
25.....	*a*	570.00	569.70	569.50	570.20	570.20	569.80	571.10	570.40	*a*	569.50	569.30
26.....	570.80	570.00	572.40	*a*	569.50	570.10	*a*	570.80	570.20	570.60	569.60	569.90
27.....	570.60	570.00	574.30	569.00	568.70	569.90	570.20	570.90	*a*	570.50	569.90	569.60
28.....	571.20	569.90	574.60	568.90	569.90	*a*	569.70	570.90	570.40	570.90	570.00	570.00
29.....	571.50	......	*a*	568.20	569.70	570.60	569.30	570.70	570.40	570.70	571.00	570.00
30.....	572.70	......	573.80	568.10	570.70	570.60	569.50	*a*	570.60	570.40	571.10	570.40
31.....	571.40	......	573.20	......	*a*	......	569.50	571.00	......	570.30	......	570.40

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Erie Canal at Change Bridge, Pendleton *

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	570.50	571.00	570.90	571.90	572.05	571.00	570.60	570.60	570.75	570.20	571.00	569.90
2.....	570.85	570.70	571.00	571.05	571.10	571.00	570.55	570.70	571.00	570.10	570.90	571.00
3.....	571.00	570.20	571.10	570.85	570.75	570.50	570.50	571.10	570.90	570.50	570.75	571.10
4.....	570.60	570.00	571.10	572.00	570.85	571.00	570.50	571.00	570.30	570.40	570.70	570.50
5.....	570.00	570.30	571.00	572.10	570.80	570.95	570.70	570.60	569.90	571.00	570.60	570.40
6.....	570.70	570.20	570.90	571.50	570.75	571.20	570.80	570.60	570.00	570.80	570.50	570.30
7.....	571.50	570.20	570.50	571.00	570.75	571.30	571.00	570.55	570.00	570.50	570.90	571.00
8.....	572.20	570.30	570.50	570.70	570.75	571.20	570.50	570.50	569.90	571.00	570.80	570.50
9.....	572.10	569.50	570.40	570.70	570.85	571.00	570.70	570.85	569.70	570.80	571.00	569.70
10.....	572.00	569.25	570.50	570.90	570.90	571.20	570.65	570.70	570.10	570.50	571.60	*y*
11.....	571.90	569.30	571.35	572.10	571.45	571.10	570.60	570.50	570.30	570.00	571.50	570.00
12.....	572.80	569.30	572.55	571.80	571.55	571.00	570.50	570.55	570.40	570.80	571.20	571.40
13.....	572.70	569.20	573.50	571.20	571.75	570.90	571.00	570.60	570.50	571.00	571.30	565.60
14.....	572.50	569.50	573.40	570.70	571.25	570.70	571.05	570.70	570.65	570.60	571.50	571.00
15.....	572.60	569.60	574.50	570.70	570.15	570.95	570.60	570.65	570.50	570.50	571.30	570.50
16.....	572.70	569.60	574.30	571.20	570.35	571.00	570.50	570.60	570.30	570.40	571.10	570.40
17.....	574.70	569.60	573.55	571.20	571.45	570.70	570.65	570.65	570.50	570.00	571.40	570.00
18.....	576.10	569.65	571.50	570.90	571.00	570.30	570.80	570.70	570.45	570.90	571.00	*y*
19.....	576.25	569.80	571.70	570.90	570.85	570.35	570.90	570.30	570.30	571.00	570.80	570.50
20.....	575.20	569.90	571.50	570.70	570.50	570.70	571.00	570.45	570.40	570.50	571.70	570.00
21.....	574.70	570.60	572.00	570.70	570.40	570.65	570.85	570.40	571.00	570.30	571.80	*x*
22.....	573.40	570.70	571.50	571.05	570.20	571.00	570.80	570.60	570.90	570.00	571.50	*x*
23.....	573.50	571.00	571.00	571.55	570.30	570.85	570.75	570.70	570.80	569.90	571.70	*x*
24.....	573.50	570.90	571.40	571.30	570.70	570.60	570.80	570.60	570.75	570.00	570.80	*x*
25.....	572.80	570.80	573.60	571.50	570.50	570.70	570.70	570.70	570.00	569.80	570.20	*x*
26.....	572.30	570.90	575.00	571.50	570.20	570.70	570.60	570.90	570.20	570.00	570.10	*x*
27.....	571.80	570.90	577.00	571.45	570.50	570.75	570.90	570.80	570.00	570.20	569.80	*x*
28.....	571.30	570.90	576.20	572.80	571.50	570.60	570.88	571.00	570.20	570.40	570.20	*x*
29.....	570.80	......	575.50	572.90	571.40	570.70	570.65	571.10	570.00	570.70	570.20	*x*
30.....	570.70	......	573.50	573.05	571.20	570.50	570.60	571.00	570.05	570.50	570.10	*x*
31.....	570.70	......	572.70	......	570.40	......	570.48	570.80	......	570.40	......	*x*

*** Superseding record published in 1913 report, vol. II; page 119.**
***x* Water-surface below bottom of gage, El. 569.0, but probably above El. 567.0.**
***y* Water-surface below bottom of gage, El. 569.0, but probably above El. 568.5 for navigation.**

Daily Elevation of Water-surface (B. C. Datum) of Erie Canal at Change Bridge, Pendleton

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	*x*	572.40	*x*	573.65	*x*	570.70	570.20	569.00	571.00	570.65	570.10	571.20
2	*x*	571.80	*x*	573.60	*x*	570.60	570.10	569.20	571.20	570.50	570.15	571.10
3	*x*	571.70	*x*	573.30	*x*	570.40	570.00	569.10	571.25	570.45	570.30	571.00
4	*x*	571.50	*x*	573.20	*x*	570.30	570.50	569.00	571.20	570.85	570.40	570.95
5	*x*	571.10	*x*	572.10	*x*	570.20	570.40	*y*	571.00	570.75	570.20	570.50
6	*x*	571.00	*x*	571.50	570.50	570.10	570.30	*y*	571.00	570.70	570.00	570.70
7	*x*	570.90	569.80	571.00	571.50	570.30	570.10	569.00	570.85	570.60	569.90	570.85
8	*x*	570.80	570.00	572.00	572.00	570.50	570.00	569.50	570.75	570.50	570.10	571.40
9	*x*	570.70	569.80	572.40	571.60	570.60	570.10	569.60	570.60	570.40	570.05	571.50
10	*x*	570.70	569.60	572.90	571.90	570.55	570.00	569.50	570.45	570.35	569.80	571.35
11	*x*	570.00	569.40	572.00	571.50	570.50	570.00	569.30	570.20	571.00	569.50	571.20
12	*x*	569.80	569.30	571.30	571.10	570.30	569.90	569.25	570.00	570.90	569.40	571.00
13	*x*	569.70	569.40	571.10	571.00	570.10	570.05	569.40	570.15	570.00	569.20	570.95
14	*x*	569.60	569.50	571.00	571.90	570.90	570.10	569.70	570.20	569.20	569.00	571.50
15	*x*	569.50	570.00	570.80	571.80	570.85	570.55	570.00	570.10	569.40	568.95	571.00
16	*x*	569.50	570.40	570.80	571.50	570.70	570.50	570.50	570.00	569.80	570.40	570.50
17	569.00	569.40	573.00	570.50	571.20	570.60	570.45	570.30	569.90	570.00	570.25	570.00
18	570.00	569.30	574.10	570.20	571.90	570.55	570.40	570.00	569.95	570.60	569.20	569.90
19	570.50	569.20	573.00	570.00	571.80	570.45	570.30	570.30	570.00	570.70	568.80	570.30
20	571.00	569.20	572.50	569.60	571.60	569.80	570.20	570.50	570.10	570.50	568.60	570.20
21	571.20	569.10	572.00	570.00	571.50	569.90	570.00	570.55	570.20	570.40	568.90	570.00
22	570.80	569.30	571.50	570.30	571.40	570.10	569.80	570.65	570.25	570.35	569.80	569.50
23	570.50	569.20	570.70	570.00	571.20	570.20	569.70	571.00	570.30	570.20	569.60	569.00
24	470.40	569.00	570.00	569.60	571.00	570.25	569.60	571.15	570.50	570.15	569.50	569.00
25	570.50	*x*	571.20	569.00	570.50	570.30	569.60	570.98	570.35	569.15	569.30	569.00
26	570.70	*x*	573.80	*x*	569.00	570.30	*y*	570.80	570.15	570.50	569.20	568.90
27	570.90	*x*	575.50	*x*	*y*	570.50	*y*	570.70	570.30	570.42	569.50	568.90
28	571.00	*x*	576.50	*x*	*y*	570.80	*y*	570.65	570.25	570.35	570.50	568.90
29	572.00	......	576.30	*x*	569.00	570.60	569.30	570.50	570.50	570.20	571.00	568.80
30	572.90	......	576.00	*x*	570.60	570.50	569.10	570.70	570.60	570.10	571.50	569.50
31	572.80	......	573.50	......	570.80	......	569.00	570.90	......	570.00	......	569.80

***x* Water-surface below bottom of gage, El. 569.0, but probably above El. 567.0.**
***y* Water-surface below bottom of gage, El. 569.0, but probably above El. 568.5 for navigation**

LITTLE TONAWANDA CREEK

LITTLE TONAWANDA CREEK AT LINDEN

Location.— At the stone arch highway bridge in the village of Linden, 600 feet northeast of Erie Railroad station and 3 miles above junction with Tonawanda creek.

Records available.— July 8, 1912, to December 31, 1914.

Drainage area.— 22.0 square miles. (Measured on topographic sheets of United States Geological Survey.)

Gage.— Vertical staff on right-hand upstream abutment of bridge; lower 2 feet of enameled iron graduated to hundredths of a foot; upper 4 feet of bronze graduated to half-tenths. Gage read daily, morning and evening, to half-tenths.

Control.—A standard Francis weir has been constructed under the upstream side of the bridge, having a length of 2.01 feet and a height of 8 inches. When the water overtops this weir it flows over a 2-inch plank about 13 feet long, including the 2 feet of weir. The weir was carried away by a floating tree on March 25, 1913, and was duplicated June 20, 1913.

Discharge measurements.— High-water measurements made from a cable and car 1,000 feet above weir; low-water measurements made by wading above weir.

Accuracy.—At gage height 0.69, or below, flow is confined to weir. During such stages the accuracy of the data will be the accuracy of a properly constructed Francis weir. For stages above gage height 0.69, weir has been rated with a current meter and data for such stages should also be excellent. Good rating curve of weir in its damaged condition obtained by current-meter measurements.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Little Tonawanda Creek at Linden

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Aug. 6 *a*	C. H. Pierce	0.27	0.89
21 *b*	C. S. De Golyer	0.66	3.14
21 *c*	C. S. De Golyer	0.792	5.57

a Measurement made by wading 200 feet below gage.
b Measurement made by wading 300 feet above gage.
c Measurement made by wading 350 feet above gage.

Daily Gage Height, in Feet, of Little Tonawanda Creek at Linden

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.78	1.46	0.90	2.10	1.15	0.82	0.50	0.29	0.75	0.46	0.64	1.00
2	.76	1.33	.76	3.80	1.08	.80	.64	.30	1.16	.44	.60	1.50
3	.76	1.32	.88	2.50	1.02	.76	.76	.32	.93	.42	.60	1.20
4	.78	2.00	.86	1.80	1.00	1.00	.60	.28	1.42	.42	.60	1.07
5	.78	1.47	.88	1.70	3.50	.93	.54	.26	.99	.40	.57	.98
6	.81	1.34	.86	1.55	3.10	.84	.50	.28	.88	.41	.56	.92
7	.80	1.31	.87	1.75	1.70	.82	.48	.28	.83	.40	.55	.84
8	.82	.95	.86	3.50	1.55	.80	.46	.24	.80	.44	.58	.83
9	.88	1.03	.84	2.10	2.70	.76	.45	.23	.74	.42	.66	.85
10	1.03	1.05	.84	2.15	1.65	.73	.44	.26	.72	.52	.62	.84
11	1.00	1.01	.84	2.90	1.50	.71	.42	.28	.71	.50	.62	.85
12	.94	.97	.85	2.30	2.10	.69	.41	.26	.70	.46	.72	.80
13	.93	.93	.84	1.80	3.20	.65	.42	.26	.66	.44	.70	.82
14	.94	.92	.88	1.65	2.05	.63	.42	.29	.62	.44	.77	.79
15	.90	.92	1.14	1.60	1.55	.61	.43	.26	.59	.43	.73	.71
16	.90	.92	2.35	2.70	1.40	.62	.42	.24	.56	.50	.83	.82
17	.94	.91	3.50	1.80	1.28	.58	.42	.25	.54	.50	.78	.81
18	.92	.91	2.50	1.60	1.20	.56	.43	.28	.53	.64	.70	.81
19	.92	.91	1.60	1.55	1.14	.66	.35	.70	.52	1.02	.72	.82
20	.92	.89	1.65	1.48	1.08	.71	.34	.60	.50	.82	.74	.84
21	.92	.88	1.65	1.41	1.04	.65	.32	.75	.49	.75	.72	.83
22	.92	.88	1.55	1.32	1.00	.62	.32	.77	.48	.70	.72	.80
23	.90	.88	1.44	1.21	1.02	.83	.36	.54	.47	.66	.72	.84
24	.99	.86	1.40	1.14	.96	.64	.40	1.74	.52	.62	.71	.82
25	1.04	.84	1.95	1.16	.92	.55	.34	.94	.50	.60	.74	.82
26	1.09	.84	5.80	1.42	.90	.52	.32	.78	.47	.62	.98	.83
27	1.10	.84	5.40	1.30	1.02	.54	.36	.71	.50	.64	1.00	.82
28	2.05	.86	4.90	1.22	.92	.55	.34	.64	.46	.60	.82	.83
29	4.00	......	3.10	1.21	.88	.52	.32	.92	.46	.58	.82	.84
30	3.40	......	3.20	1.28	.94	.53	.31	.98	.48	.61	.82	1.17
31	1.75	......	2.45	......	.86	......	.30	.82	......	.66	......	1.22

NOTE.— The crest of the weir was kept free of ice during the winter, maintaining a constant discharge relation.

Daily Discharge, in Second-feet, of Little Tonawanda Creek at Linden

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	5.1	40.0	8.4	91.0	19.0	6.10	2.12	0.91	4.40	1.87	3.07	12.0
2.....	4.6	30.0	4.6	274.0	15.0	5.60	3.07	.96	19.10	1.74	2.79	43.0
3.....	4.6	29.0	7.8	126.0	13.0	4.60	4.60	1.07	9.40	1.62	2.79	21.0
4.....	5.1	83.0	7.2	67.0	12.0	12.00	2.79	.87	36.60	1.62	2.79	15.0
5.....	5.1	41.0	7.8	59.0	235.0	9.40	2.38	.77	11.80	1.51	2.58	11.0
6.....	5.9	30.0	7.2	47.0	187.0	6.60	2.12	.87	7.80	1.56	2.51	9.0
7.....	5.6	28.0	7.5	63.0	59.0	6.10	1.99	.87	6.40	1.51	2.45	6.6
8.....	6.1	10.0	7.2	235.0	47.0	5.60	1.87	.68	5.60	1.74	2.65	6.4
9.....	7.8	13.0	6.6	91.0	144.0	4.60	1.81	.63	4.20	1.62	3.21	6.9
10.....	13.0	14.0	6.6	95.0	55.0	4.10	1.74	.77	3.90	2.25	2.93	6.6
11.....	12.0	12.0	6.6	164.0	43.0	3.70	1.62	.87	3.70	2.12	2.93	6.9
12.....	9.7	11.0	6.9	108.0	91.0	3.48	1.56	.77	3.60	1.87	3.90	5.6
13.....	9.4	9.4	6.6	67.0	199.0	3.14	1.62	.77	3.21	1.74	3.60	6.1
14.....	9.7	9.0	7.8	55.0	87.0	3.00	1.62	.91	2.93	1.74	4.90	5.3
15.....	8.4	9.0	18.0	51.0	47.0	2.86	1.68	.77	2.72	1.68	4.10	4.6
16.....	8.4	9.0	112.0	144.0	35.0	2.93	1.62	.68	2.51	2.12	6.40	6.1
17.....	9.7	8.7	235.0	67.0	26.0	2.65	1.62	.72	2.38	2.12	5.10	5.9
18.....	9.0	8.7	126.0	51.0	21.0	2.51	1.68	.87	2.32	3.07	3.60	5.9
19.....	9.0	8.7	51.0	47.0	18.0	3.21	1.23	3.60	2.25	13.00	3.90	6.1
20.....	9.0	8.1	55.0	41.0	15.0	3.70	1.17	2.79	2.12	6.10	4.20	6.6
21.....	9.0	7.8	55.0	36.0	13.0	3.14	1.07	4.40	2.05	4.40	3.90	6.4
22.....	9.0	7.8	47.0	29.0	12.0	2.93	1.07	4.90	1.99	3.60	3.90	5.5
23.....	8.4	7.8	38.0	22.0	13.0	6.40	1.28	2.38	1.93	3.21	3.90	6.6
24.....	11.0	7.2	35.0	18.0	10.0	3.07	1.51	62.00	2.25	2.93	3.70	6.1
25.....	14.0	6.6	79.0	19.0	9.0	2.45	1.17	9.70	2.12	2.79	4.20	6.1
26.....	16.0	6.6	584.0	37.0	8.4	2.25	1.07	5.10	1.93	2.93	11.00	6.4
27.....	16.0	6.6	516.0	28.0	13.0	2.38	1.28	3.70	2.12	3.07	12.00	6.1
28.....	87.0	7.2	436.0	22.0	9.0	2.45	1.17	3.07	1.87	2.79	6.10	6.4
29.....	302.0	......	187.0	22.0	7.8	2.25	1.07	9.00	1.87	2.65	6.10	6.6
30.....	223.0	......	199.0	26.0	9.7	2.32	1.01	11.10	1.99	2.86	6.10	20.0
31.....	63.0	......	122.0	......	7.2	......	.96	6.10	......	3.21	......	22.0
Mean...	29.5	16.8	96.6	73.4	47.7	4.18	1.69	4.60	5.23	2.81	4.38	9.51

NOTE.— Daily discharge determined from well-defined rating curve.

Monthly Discharge of Little Tonawanda Creek at Linden
[Drainage area, 22.0 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January....................	302.0	4.60	29.50	1.340	1.54	A
February....................	83.0	6.60	16.80	0.764	0.80	A
March....................	584.0	4.60	96.60	4.390	5.06	A
April....................	235.0	18.00	73.40	3.340	3.73	A
May....................	235.0	7.20	47.70	2.170	2.50	A
June....................	12.0	2.25	4.18	0.190	0.21	A
July....................	4.6	.96	1.69	0.077	0.09	A
August....................	62.0	.63	4.60	0.209	0.24	A
September....................	36.6	1.87	5.23	0.238	0.26	A
October....................	13.0	1.51	2.81	0.128	0.15	A
November....................	12.0	2.45	4.38	0.199	0.22	A
December....................	43.0	4.60	9.51	0.432	0.50	A
The year....................	58.4	0.63	25.0	1.130	15.30	.....

CATTARAUGUS CREEK

DESCRIPTION

Cattaraugus creek rises in the southwestern part of Wyoming county and flows in a westerly direction, entering Lake Erie about 25 miles southwest of Buffalo, on the boundary line between Erie and Chautauqua counties. The stream is about 55 miles long and drains an area of approximately 560 square miles above the mouth. A large portion of its course forms the boundary between Erie and Chautauqua counties. Its headwaters rise at an elevation of between 1,900 to 2,000 feet. The drainage basin is hilly, fairly well timbered and rather narrow. There are few tributary streams, those of most importance entering the river from the south.

South branch of Cattaraugus creek, which is the largest tributary, enters at a point about two miles above Gowanda. There is a dam at Gowanda which is used for developing electric power and also for running a local grist-mill.

CATTARAUGUS CREEK AT VERSAILLES

Location.— On a three-span highway bridge in the village of Versailles, about 6 miles below Gowanda, 2¼ miles above the mouth of Clear creek (coming in from the right) and about 8 miles above the mouth of the stream.

Records available.— September 23, 1910, to December 31, 1914.

Drainage area.— 467 square miles. (Measured on Post Route map.)

Gage.— Chain, fastened to the upstream side of the first span from the right-hand end of the bridge; read twice daily to quarter tenths at about 9 A. M. and 6 P. M., datum unchanged.

Control.— Rock and gravel; occasionally shifting.

Discharge measurements.— Made from the downstream side of the bridge.

Winter flow.— Relation of gage height to discharge affected by ice. Gage observations suspended during this period.

Accuracy.— Discharge curve well defined. Estimates as published, fairly good.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Cattaraugus Creek at Versailles

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Mar. 31	C. S. De Golyer	6.61	2,350
Aug. 22 *a*	C. S. De Golyer	5.26	318
22 *b*	C. S. De Golyer	5.21	277
Sept. 30 *c*	E. D. Burchard	4.92	129
30 *d*	E. D. Burchard	4.94	143

a Measurement made by wading 75 feet below gage.
b Measurement made by wading 150 feet below gage.
c Measurement made by wading 300 feet below gage.
d Measurement made by wading 300 feet above gage.

Daily Gage Height, in feet, of Cattaraugus Creek at Versailles

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.18	6.25	......	6.25	5.48	5.30	4.98	4.80	5.25	4.85	5.02	6.00
2	5.18	5.95	......	7.20	5.38	5.22	5.00	4.82	6.15	4.88	5.02	6.90
3	5.20	5.77	......	6.70	5.32	5.20	5.00	4.80	5.65	4.88	5.02	6.50
4	5.26	6.25	......	6.30	5.32	5.40	4.95	4.80	5.85	4.85	5.12	5.92
5	5.18	6.10	......	6.10	6.45	5.58	4.92	4.82	5.55	4.85	5.18	5.58
6	5.22	5.85	......	5.98	6.75	5.32	4.90	4.80	5.28	4.88	5.15	5.52
7	5.22	5.30	5.78	6.05	6.00	5.28	4.88	4.80	5.20	4.88	5.18	5.42
8	5.26	5.20	......	7.60	5.35	5.20	4.90	4.72	5.12	4.98	5.28	5.40
9	5.38	5.37	......	6.40	7.80	5.18	4.85	4.75	5.10	5.05	5.35	5.35
10	5.78	5.60	......	6.20	7.60	5.12	4.82	4.80	5.02	5.22	5.28	5.38
11	5.45	5.60	......	6.40	7.80	5.08	4.80	5.02	5.02	5.15	5.32	5.32
12	5.20	5.55	......	6.60	8.20	5.10	4.80	4.92	5.02	5.08	5.65	5.30
13	5.17	5.50	......	6.20	7.80	5.05	4.88	4.85	5.02	5.08	5.48	5.20
14	5.55	5.57	......	5.98	6.50	5.05	4.92	4.88	4.98	5.02	5.52	5.15
15	5.83	5.70	......	5.90	6.10	5.02	4.95	4.90	4.95	4.95	5.48	4.92
16	5.80	5.67	7.40	6.45	5.82	5.02	4.92	4.88	5.02	4.98	5.40	4.82
17	5.77	5.67	7.00	6.20	5.68	5.00	4.85	4.90	4.98	5.00	5.48	4.80
18	5.73	5.63	6.80	5.82	5.58	5.00	4.88	4.98	4.92	5.18	5.58	4.82
19	5.65	5.63	6.30	5.85	5.52	5.02	4.90	5.50	4.92	5.40	5.58	4.88
20	5.73	5.60	6.10	5.80	5.42	5.12	4.90	5.12	4.92	5.20	5.52	5.85
21	5.83	5.55	5.92	5.82	5.40	5.05	4.88	5.25	4.92	5.08	5.50	5.82
22	5.87	5.60	5.60	5.82	5.35	5.05	4.80	5.10	4.92	5.02	5.48	5.75
23	5.83	5.63	5.52	5.88	5.38	5.00	4.80	5.10	4.90	5.00	5.40	5.82
24	6.45	5.57	5.52	5.82	5.35	5.00	4.92	6.40	4.92	4.98	5.45	5.92
25	5.33	5.60	6.05	5.85	5.30	5.00	4.82	5.90	5.08	4.98	5.55	6.00
26	5.30	......	8.40	5.98	5.30	4.95	4.80	5.40	4.98	5.00	5.60	5.92
27	5.37	......	8.70	5.85	5.32	4.92	4.85	5.15	4.88	5.00	6.15	6.00
28	8.00	......	9.10	5.58	5.40	4.98	4.80	5.32	4.82	5.02	5.90	6.00
29	7.40	......	7.00	5.58	5.30	5.00	4.82	5.42	4.90	5.00	5.58	6.05
30	7.20	......	6.80	5.55	6.10	5.02	4.80	5.45	4.90	5.02	5.48	6.65
31	6.75	......	6.40	......	5.55	......	4.82	5.25	......	5.00	......	6.70

NOTE.— Discharge relation affected by ice, January 14 to 27, February 9 to March 15, and from about December 18 to 31, inclusive.

Daily Discharge, in Second-feet, of Cattaraugus Creek at Versailles

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	277	1,600	......	1,600	515	350	157	90	315	108	179	1,180
2.....	277	1,110	......	3,980	418	294	165	97	1,260	116	179	3,090
3.....	300	862	......	2,570	367	280	165	90	700	116	179	2,110
4.....	345	1,600	......	1,700	367	435	145	90	960	108	235	1,070
5.....	277	1,340	......	1,340	2,000	619	133	97	588	108	265	614
6.....	315	968	......	1,150	2,700	367	125	90	336	116	250	561
7.....	315	375	......	1,260	1,180	336	117	90	280	116	265	460
8.....	345	300	......	5,320	392	280	125	66	232	155	332	435
9.....	443	......	......	1,900	6,050	268	108	75	220	192	392	392
10.....	875	......	......	1,510	5,320	232	97	90	176	315	332	414
11.....	508	......	......	1,900	6,050	209	90	176	176	250	371	371
12.....	300	......	......	2,330	7,640	220	90	133	176	206	700	350
13.....	280	......	......	1,510	6,050	192	117	108	176	206	510	280
14.....	......	......	......	1,150	2,110	192	133	118	157	179	561	250
15.....	......	......	......	1,030	1,340	176	145	125	145	145	510	135
16.....	......	......	4,630	2,000	918	176	133	118	176	155	435	99
17.....	......	......	3,370	1,510	736	165	108	125	157	165	510	90
18.....	......	......	2,820	918	619	165	117	157	133	265	614	......
19.....	......	......	1,700	960	556	176	125	535	133	435	614	......
20.....	......	......	1,340	890	455	232	125	232	133	280	561	......
21.....	......	......	1,060	918	435	192	117	315	133	206	535	......
22.....	......	......	660	918	392	192	90	220	133	179	510	......
23.....	......	......	576	1,000	418	165	90	220	125	165	435	......
24.....	......	......	576	918	392	165	133	1,900	133	155	485	......
25.....	......	......	1,260	960	350	165	97	1,030	209	155	588	......
26.....	......	......	8,440	1,150	350	145	90	435	157	165	640	......
27.....	......	......	9,640	960	367	133	108	250	118	165	1,420	......
28.....	8,640	......	11,200	619	435	157	90	367	97	179	1,030	......
29.....	4,630	......	3,370	619	350	165	97	455	125	165	614	......
30.....	3,980	......	2,820	588	1,340	176	90	485	125	179	510	......
31.....	2,700	......	1,900	......	588	......	97	315	......	165	......	......
Mean...	903	441	1,870	1,510	1,650	234	117	280	266	181	491	584

NOTE.— Daily discharge determined from a rating curve that was well defined below 4,500 second-feet.

Monthly Discharge of Cattaraugus Creek at Versailles

[Drainage area, 467 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January....................	8,640	....	903	1.93	2.23	B
February....................	1,600	....	441	0.944	0.98	C
March....................	11,200	....	1,870	4.00	4.61	B
April....................	5,320	588	1,510	3.23	3.60	A
May....................	7,640	350	1,650	3.53	4.07	A
June....................	619	133	234	0.501	0.56	B
July....................	165	90	117	0.251	0.29	B
August....................	1,900	66	280	0.600	0.69	B
September....................	1,260	97	266	0.570	0.64	B
October....................	435	108	181	0.388	0.45	B
November....................	1,420	179	491	1.05	1.17	B
December....................	3,090	90	584	1.25	1.44	C
The year....................	11,200	66	713	1.53	20.73	.....

NOTE.— Mean discharge, estimated by comparison with records on Genesee river and Little Tonawanda creek, as follows: January 14 to 27, 227 second-feet; February 9 to 28, 210 second-feet; March 1 to 15, 171 second-feet; December 18 to 31, 444 second-feet.

HUDSON RIVER DRAINAGE BASIN

DESCRIPTION OF BASIN

The principal sources of the Hudson river lie in the wildest portion of the Adirondack mountains, in Essex county, northeastern New York. A number of branches, any one of which might possibly be considered the main stream, form its upper waters; but if the highest collected and permanent body of water be assumed as the true head, then the source of the Hudson becomes Lake Tear-of-the-Clouds, which lies at an elevation of 4,322 feet above tide, in the centre of the triangle formed by Mount Marcy and Skylight and Gray peaks.

The river flows rather irregularly southward until it reaches the northern boundary of Saratoga county, where it makes a sharp turn and flows eastward for about 12 miles, passing through the mountains and forming, as it cuts across the rocky strata, several falls of great height and beauty. At Hudson Falls, just below Glens Falls, it makes another abrupt turn and flows southward, continuing in this direction until it empties into New York bay.

From Lake Tear-of-the-Clouds to the mouth of the river the distance by water is probably about 300 miles. The total area drained is 13,366 square miles. The river is tidal to Troy, which is also at the head of navigation.

The headwater region is mountainous in character, is in general heavily wooded and is dotted with numerous lakes and ponds. The rocks, belonging to the oldest formation and mainly granitic, are either bare or covered only with a layer of spruce duff, humus and forest litter. The river emerges from the mountain region a few miles west of Glens Falls and thence to Troy the topography is moderately rolling and the soil is chiefly sand. Below Troy the river follows the great depression which extends almost due north and south between New York bay and the St. Lawrence, flowing in an open valley bordered by well-cultivated lands, which rise with moderate slope from the stream. The Catskill Mountain region is reached 20 or 30 miles below Albany and thence to the mouth of the river the immediate valley is flanked by high hills, the Highlands of Orange county, and the precipitous Palisades being especially noticeable.

The fall in the upper portion of the course is very rapid, amounting to about 64 feet per mile from Lake Tear-of-the-Clouds to the mouth of North creek, a distance of about 52 miles. From the mouth of North creek to the mouth of the Sacandaga the descent is nearly 14 feet per mile, distributed among rapids which diminish in frequency as the Sacandaga is approached. In the succeeding 26 miles to Fort Edward the river descends 418 feet more. One hundred and seventy-five feet is comprised within the three abrupt pitches at Palmer, Glens, and Bakers Falls, while most of the remainder occurs in the rapids between Jessup's Landing and the oxbow above Glens Falls. Between Glens Falls and Troy nearly the entire fall of the river is utilized for the development of water power.

The tributaries of the Hudson are numerous and many of them are large and important. Indian river, Schroon river and the Sacandaga unite with the main stream above Glens Falls and between the latter point and Troy it receives Batten kill, Fish creek, Hoosic river and the Mohawk, the latter having several important tributaries, including West and East Canada and Schoharie creeks. The tributaries below Troy include Catskill, Esopus and Rondout creeks and Wallkill river from the west and Kinderhook creek, Jansen kill, Wappinger creek, Fishkill creek and Croton river from the east.

Below Troy the bed of the Hudson river is depressed below tidewater level. The stage of the stream is controlled by tidal action, by the inflow of the main stream and by the lateral drainage jointly.

The mean annual precipitation on the total basin of the Hudson is probably about 43 inches. It reaches a maximum of more than 55 inches in the heights of the Adirondacks, while in the eastern portion of the drainage area, in southern Vermont, the mean annual total is only about 39 inches. Conditions during the winter period vary from the extreme cold and deep snow of the Adirondacks to the areas in the southern portion of the basin, which are subject to frequent winter thaws.

The flow of the upper Hudson is controlled to some extent during the dry season by the use of Indian Lake storage reservoir, and the natural storage facilities in the Adirondack region are unsurpassed, there being a great many ponds and lakes, many of large size and fed from extensive drainage areas.

The longest run-off record in the Hudson river drainage basin is that obtained at Mechanicville, which extends back to 1888.

LOWER HUDSON RIVER DRAINAGE BASIN

HUDSON RIVER

HUDSON RIVER AT ALBANY

The following tables, furnished by the United States Engineer Office, Albany, N. Y., through the courtesy of Major M. J. McDonough, Corps of Engineers, U. S. Army, give the elevations of the lowest high and lowest low tide recorded daily by the automatic tide gage at foot of State street, Albany, during the year 1914.

The elevations are referred to an assumed plane of lowest low water in the Hudson river at this locality, which is 2.0 feet below the mean sea level at Sandy Hook, N. J., or 15.863 feet below the elevation of "Greenbush" bench-mark, as published in the Annual Report of the U. S. Coast and Geodetic Survey for 1903, Appendix No. 3.

The plane of mean low tide at Albany, as determined from the mean of observations taken July 3 to November 17, 1876, was about 13.40 feet below the Greenbush bench-mark and, as determined by observations taken during the same period in 1908 and 1909, was about 13.80 feet below that bench-mark.

To reduce elevations in the tables to Barge canal datum, subtract 1.13 feet.

Daily Record of Elevation of Lowest High Tide in Hudson River at Albany

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	4.27	6.26	4.91	12.02	10.67	5.29	*a*	4.92	5.70	4.35	4.40	4.78
2.....	5.27	5.53	3.98	12.70	8.98	4.82	*a*	4.80	5.71	4.77	5.00	4.95
3.....	5.53	5.58	4.97	12.52	8.64	5.08	*a*	5.19	5.32	4.33	3.79	5.00
4.....	6.41	5.31	4.90	11.17	8.09	5.29	*a*	4.60	5.50	4.80	5.06	4.53
5.....	6.06	4.77	5.12	*a*	7.67	4.33	*a*	4.89	5.39	4.83	4.63	4.67
6.....	4.89	4.99	4.26	8.88	8.14	4.58	*a*	5.09	5.66	4.80	3.68	5.45
7.....	4.91	6.20	5.21	8.34	8.60	4.98	*a*	5.23	5.31	5.23	4.28	5.61
8.....	3.98	4.48	4.48	8.06	8.19	4.88	*a*	4.87	4.41	4.80	4.84	6.66
9.....	4.72	2.97	4.60	12.78	7.64	5.86	5.17	4.77	4.42	4.48	3.23	6.07
10.....	*a*	3.36	4.27	13.35	6.73	5.31	5.71	4.93	4.64	5.02	4.30	5.93
11.....	2.37	3.91	4.11	12.12	6.58	4.09	5.60	5.23	4.09	4.58	5.04	5.80
12.....	3.80	3.11	4.60	10.96	6.21	5.00	5.41	4.27	4.22	3.86	4.57	5.35
13.....	*b*	2.95	4.90	10.50	7.81	4.92	5.40	4.52	4.05	3.48	4.58	5.17
14.....	3.42	4.68	5.04	9.08	7.48	4.78	5.30	4.52	4.00	5.06	4.38	5.62
15.....	4.00	3.20	4.70	8.80	6.41	5.48	5.10	4.20	4.14	5.03	4.35	4.04
16.....	4.50	4.09	5.11	9.27	6.59	4.54	4.98	3.96	4.20	5.03	6.68	3.31
17.....	4.76	3.40	5.79	9.06	5.89	4.12	4.78	4.33	4.57	5.40	4.69	3.47
18.....	4.07	2.95	7.04	9.09	5.45	4.20	*a*	4.53	4.83	5.76	4.10	4.16
19.....	4.96	3.29	6.07	9.49	4.95	4.95	*a*	4.46	5.30	5.38	5.33	4.30
20.....	4.89	3.64	5.44	10.50	4.78	2.70	4.78	4.79	5.72	5.28	5.42	4.30
21.....	4.66	4.20	5.03	15.49	4.90	4.38	5.10	5.37	5.47	5.30	5.28	4.26
22.....	4.09	5.06	*a*	16.29	5.19	4.19	4.70	5.14	5.22	4.99	4.95	3.72
23.....	3.96	4.49	5.19	13.50	4.58	4.90	5.30	5.62	5.34	4.51	4.24	2.94
24.....	4.50	4.29	4.80	11.69	4.60	4.82	5.33	5.65	5.29	5.13	3.99	3.09
25.....	4.29	4.30	4.64	10.04	5.10	5.90	5.35	5.18	4.59	4.07	4.40	3.69
26.....	3.71	4.36	5.52	9.70	4.89	4.55	5.08	5.22	3.41	5.67	4.22	3.13
27.....	4.80	4.41	7.99	10.61	4.52	4.65	5.28	5.18	4.27	3.64	4.68	3.23
28.....	4.85	4.59	11.47	10.13	4.30	5.26	5.45	5.23	3.95	4.17	3.67	4.06
29.....	4.73	......	15.41	9.60	5.50	......	5.30	5.21	4.76	4.80	4.69	3.49
30.....	5.48	......	13.46	10.64	4.84	......	5.02	4.78	4.63	4.83	4.56	4.42
31.....	5.10	......	11.63	......	4.80	......	5.08	5.52	......	3.89	......	3.18

Elevations are referred to an assumed plane of lowest low water in this locality, which is two feet below mean sea level. To reduce to Barge canal datum, subtract 1.13 feet.
a No record. *b* Record doubtful.

Daily Record of Elevation of Lowest Low Tide in Hudson River at Albany

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	2.84	6.32	3.20	11.93	10.09	2.17	*a*	1.79	3.29	1.46	0.93	2.34
2.....	3.65	4.85	2.39	13.54	8.30	1.41	*a*	1.78	2.85	1.63	1.50	2.64
3.....	3.86	4.87	4.21	11.51	7.83	1.87	*a*	1.92	2.35	1.60	0.96	2.56
4.....	4.26	4.58	3.86	*a*	6.85	2.12	*a*	1.70	2.49	1.46	2.16	2.37
5.....	3.91	4.02	3.85	*a*	6.68	1.39	*a*	1.91	2.37	1.90	1.47	2.72
6.....	3.01	4.00	3.54	7.87	7.37	1.59	*a*	2.02	2.57	1.53	1.00	2.99
7.....	3.04	4.70	4.12	7.20	7.21	1.83	*a*	2.12	2.00	2.49	1.98	3.40
8.....	2.48	2.68	3.34	7.18	6.74	2.04	*a*	1.85	1.52	1.93	1.22	3.34
9.....	3.06	1.81	3.48	14.63	5.77	2.60	2.15	1.60	1.66	2.03	1.26	3.12
10.....	2.57	2.22	2.90	12.33	4.90	2.31	2.49	2.19	2.00	2.48	2.02	2.70
11.....	1.00	2.31	2.96	11.20	4.67	2.02	2.43	2.15	1.82	1.67	1.58	2.71
12.....	1.92	1.43	3.47	10.73	4.41	2.07	2.30	1.38	1.79	1.24	1.77	2.09
13.....	*b*	1.37	3.48	9.53	6.57	2.02	2.20	1.62	1.54	1.49	1.51	2.01
14.....	*b*	2.50	3.61	8.30	6.33	1.51	2.32	2.20	1.70	1.90	1.13	2.55
15.....	2.28	1.60	3.42	8.41	5.10	2.37	2.20	1.71	1.80	1.96	1.38	1.00
16.....	2.69	1.89	4.03	8.78	4.63	1.10	2.40	1.67	1.59	1.80	2.41	0.60
17.....	2.04	1.61	5.50	8.75	4.11	1.46	2.67	1.88	1.64	2.11	1.50	1.89
18.....	2.10	2.04	5.90	8.69	3.50	1.81	*a*	1.91	1.71	2.11	1.90	2.65
19.....	3.15	2.09	5.60	9.00	3.11	2.33	*a*	1.71	1.85	2.01	2.69	2.91
20.....	2.90	2.31	5.00	11.45	2.63	0.70	2.23	1.85	2.17	2.04	2.73	2.55
21.....	2.90	2.79	4.50	16.65	2.67	1.58	2.47	2.36	2.04	1.99	2.25	3.09
22.....	2.14	3.41	*a*	15.29	2.91	1.63	2.20	2.12	1.93	1.51	2.10	2.20
23.....	2.32	2.64	3.90	12.94	2.10	2.07	1.86	2.45	2.12	2.02	1.25	1.87
24.....	2.70	2.72	3.81	10.86	2.20	2.10	1.70	2.30	1.93	1.57	1.90	2.27
25.....	1.83	2.52	3.64	9.37	2.80	1.90	2.18	2.03	1.47	1.70	1.52	2.26
26.....	2.46	2.60	4.95	9.11	2.34	1.65	1.84	2.25	0.71	0.87	1.28	2.00
27.....	3.11	2.68	7.38	10.61	2.15	1.73	1.87	2.22	0.89	2.85	1.42	2.22
28.....	3.30	2.88	13.07	9.67	2.00	1.74	2.07	2.26	1.53	1.97	1.02	2.37
29.....	3.40	......	16.40	9.41	2.53	*a*	1.91	2.73	1.74	1.90	2.07	2.24
30.....	4.51	......	12.99	10.96	2.18	*a*	2.03	2.50	1.20	1.56	2.43	2.48
31.....	4.70	......	11.52	......	1.77	......	1.86	3.49	......	0.87	......	1.71

Elevations are referred to an assumed plane of lowest low water in this locality, which is two feet below mean sea level. To reduce to Barge canal datum, subtract 1.13 feet.
a No record. *b* Record doubtful.

HUDSON RIVER BELOW TROY DAM

This gage is at the lower end of the Sloop lock at Troy. The elevation given is the average of two readings, at 7:00 A. M. and 5:00 P. M. As the river is tidal at this point, changes of elevations at ordinary stages of the river are due more to tides than to discharge.

Daily Elevation of Water-surface (B. C. Datum) of Hudson River below State Dam at Troy

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	2.86	6.66	5.01	12.76	13.16	6.01	4.01	3.21	4.41	3.66	3.91	4.86
2.....	2.91	6.66	5.16	13.66	12.61	5.96	4.36	3.21	4.46	3.61	4.56	5.11
3.....	3.36	7.01	4.86	13.51	12.06	6.31	4.16	3.36	3.86	4.26	4.31	4.51
4.....	3.66	6.16	4.26	12.66	11.91	6.21	3.96	3.61	3.81	3.71	3.91	3.86
5.....	3.96	5.71	4.76	12.51	10.76	6.11	4.01	3.46	3.81	3.96	3.66	3.81
6.....	3.76	5.66	4.36	12.11	9.61	5.96	4.06	3.41	3.06	3.46	3.51	4.41
7.....	3.56	5.31	5.11	11.96	9.06	5.81	3.71	3.41	3.11	3.31	3.51	4.61
8.....	3.71	5.01	4.76	12.06	8.81	5.86	3.61	3.36	2.86	3.51	4.01	4.36
9.....	4.16	5.11	4.36	18.31	7.41	5.76	3.96	3.71	2.86	3.31	4.36	4.61
10.....	5.66	5.46	5.61	18.26	6.71	5.66	4.06	3.91	3.41	3.46	4.16	4.76
11.....	6.46	5.76	4.86	18.11	5.56	5.61	4.31	3.21	2.86	3.01	3.71	4.66
12.....	7.46	5.56	5.46	17.41	6.56	5.61	4.36	4.01	3.21	3.11	3.51	4.26
13.....	7.76	5.41	5.06	13.16	7.01	5.51	3.91	3.71	3.21	3.41	3.86	5.01
14.....	7.76	5.21	6.01	12.66	5.96	5.51	4.36	3.46	2.76	3.31	3.81	5.11
15.....	6.66	5.86	6.06	12.66	6.01	5.46	3.96	3.21	2.96	3.66	3.56	5.21
16.....	6.06	5.26	5.71	12.91	5.96	5.41	3.86	3.51	3.01	4.21	3.46	4.76
17.....	6.21	4.96	5.31	12.36	5.56	5.36	4.31	3.21	3.46	3.91	4.06	4.66
18.....	6.81	4.51	5.51	12.01	5.41	5.26	4.41	3.26	3.46	3.91	4.31	4.21
19.....	6.71	4.11	5.91	17.01	6.01	5.11	4.61	3.46	3.41	4.06	4.61	4.06
20.....	5.61	4.26	5.86	18.26	6.36	5.11	3.96	4.06	3.46	3.71	5.16	5.01
21.....	5.36	4.46	6.11	20.01	6.56	5.06	3.66	4.06	3.11	2.66	5.36	5.21
22.....	6.36	4.36	5.96	19.21	6.61	5.06	3.36	3.61	3.11	3.46	5.06	4.71
23.....	5.81	4.71	7.16	19.01	5.81	4.91	3.21	3.26	3.41	3.96	5.86	4.36
24.....	5.41	5.01	8.06	18.76	4.86	4.96	2.86	3.81	3.41	4.11	4.96	4.21
25.....	5.21	4.66	10.26	17.91	5.21	5.01	3.21	3.56	3.36	4.11	5.01	4.76
26.....	5.76	4.81	12.91	17.11	5.71	5.06	3.26	3.16	3.36	4.01	4.71	5.01
27.....	5.76	5.56	15.51	15.86	5.96	4.86	2.76	3.86	3.51	4.11	4.86	4.66
28.....	6.51	5.01	14.86	15.36	6.36	4.71	2.61	4.01	3.41	3.86	4.66	4.46
29.....	7.21	......	12.46	14.66	7.06	4.56	3.01	4.26	3.96	3.86	4.61	3.66
30.....	7.11	......	12.21	14.06	7.16	4.46	2.76	4.06	3.56	3.86	5.01	3.46
31.....	7.56	......	10.86	......	6.06	......	2.91	4.51	......	3.76	......	3.51

For elevation of water-surface above dam at Troy, see page 208.

RONDOUT CREEK

DESCRIPTION

Rondout creek has its source in the heart of the timber-covered mountain group forming Wittemberg chain. It flows southeasterly to Napanoch, where it encounters the foot of Shawangunk range, turns abruptly to the northeast and enters the Hudson river at Rondout. Its watershed on the south is very restricted, as it is separated from the Wallkill river only by the narrow Shawangunk ridge. Notable waterfalls occur at Honk falls and Napanoch over Hudson river shale, and on Good Beer kill above

Ellenville. On Good Beer kill there is a total fall of 870 feet from the Cape, three miles above Ellenville, to Ellenville. Of this about 200 feet are concentrated in a series of cascades, called Hanging Rock falls.

Water power was originally developed at Napanoch in 1754. At present there are five dams in this village, utilizing a total of 115 feet fall. A series of cascades, involving a descent of about 50 feet, occurs at High Falls, where the water flows over Rosendale cement rock.

RONDOUT CREEK AT ROSENDALE

The Rosendale gaging station is located on the highway bridge and was established by Robert E. Horton for the United States Geological Survey in coöperation with the New York City Water Supply Departments on July 6, 1901; it was assumed by the Board of Water Supply of the city of New York on June 1, 1907, at which time a new standard Board of Water Supply chain gage was put in to replace the old one.

Measurements are taken from the bridge at high and medium stages and by wading at a point about 1,000 feet below the bridge at low stages.

The gage is located on the downstream side of the bridge in the middle panel.

The water is confined to one channel under the single-span steel bridge, which is 135.7 feet between abutments, at all stages.

A portion of the water of the creek is diverted by a dam below High Falls and sent through the Delaware and Hudson canal and is discharged into the creek below the gaging station. At Creek Locks, which is about 1½ miles below Rosendale, there is an overflow weir, from which the approximate discharge of the canal may be obtained. The weir, which has a crest of 3.8 feet, is located at the left end of the lock and is equipped with a standard Board of Water Supply staff gage.

The records here published have been furnished by J. Waldo Smith, Chief Engineer, Board of Water Supply of the city of New York.

Daily Discharge, in Second-feet, of Rondout Creek at Rosendale

1914	Jan.	Feb.	Mar.	April	†May	†June	†July	†Aug.	†Sept.	Oct.	Nov.	Dec.
1......	730	1,793	609	4,260	1,370	350	153	112	118	92	78	295
2......	730	2,002	560	6,308	1,110	203	257	75	104	68	122	292
3......	770	1,804	595	4,452	810	212	346	90	92	68	94	*407
4......	514	1,881	595	2,992	826	247	272	70	80	56	101	214
5......	474	1,736	616	2,456	1,490	596	130	80	75	42	101	188
6......	594	1,170	672	2,000	3,286	366	126	86	70	40	101	181
7......	490	1,130	567	2,600	1,885	261	189	54	86	117	90	211
8......	434	874	552	2,456	1,218	290	344	40	107	75	107	940
9......	394	746	537	5,956	1,210	359	300	37	92	62	108	610
10......	394	625	473	3,428	1,090	254	195	37	84	62	140	503
11......	554	587	428	2,456	989	222	195	104	75	62	169	447
12......	490	552	421	2,456	1,312	165	138	94	75	62	137	391
13......	427	486	436	1,976	5,806	138	123	87	75	62	122	330
14......	420	467	439	1,530	2,376	188	163	94	70	62	151	715
15......	413	471	552	1,270	865	265	304	96	127	62	130	570
16......	406	469	696	1,090	1,183	150	286	96	117	86	519	427
17......	402	453	639	1,904	1,000	202	224	100	108	199	391	468
18......	411	439	696	1,650	895	150	262	95	100	220	361	475
19......	391	436	857	1,430	*806	156	189	106	95	338	180	497
20......	384	421	792	2,312	662	162	165	86	80	368	175	461
21......	380	414	589	3,230	616	135	150	175	76	220	233	428
22......	373	410	573	2,132	601	111	129	141	62	171	171	453
23......	485	403	746	1,560	520	124	149	145	54	*188	155	409
24......	623	399	794	1,250	377	185	105	110	62	98	234	508
25......	876	392	1,100	1,140	366	209	117	127	78	97	238	530
26......	695	519	4,452	3,812	380	188	101	126	86	75	205	440
27......	623	587	6,608	3,188	412	264	94	97	86	78	281	508
28......	623	‡517	15,235	2,060	360	132	91	97	86	78	356	625
29......	876	......	8,750	1,670	243	163	159	104	74	81	292	616
30......	2,260	......	5,460	1,630	243	233	94	89	62	89	274	550
31......	2,026	......	3,972	......	251	......	106	127	......	106	......	489
Mean...	634	792	1,936	2,555	1,115	223	182	96	85	112	194	457

* Meter measurement. † Water was turned into D. & H. canal on May 3. Canal closed for the winter season September 30. Flow through canal is here included. ‡ Two-meter measurement.

NOTE.— Ice conditions prevailed from January 13 to 31, February 12 to 28, March 1 to 17 and December 1 to 31, inclusive. Ice went out on January 31. All ice out of stream March 23.

Monthly Discharge of Rondout Creek at Rosendale
[Drainage area, 386 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January..........................	2,260	373	634	1.64	1.893
February..........................	2,002	392	792	2.05	2.135
March..........................	15,235	421	1,936	5.01	5.780
April..........................	6,308	1,090	2,555	6.61	7.381
May..........................	5,806	243	1,115	2.89	3.328
June..........................	596	111	223	0.58	0.642
July..........................	346	91	182	0.47	0.544
August..........................	175	37	96	0.25	0.287
September..........................	127	54	85	0.22	0.244
October..........................	368	40	112	0.29	0.335
November..........................	519	78	194	0.50	0.561
December..........................	940	181	457	1.18	1.363
The year..........................	15,235	37	697	1.81	24.493

RONDOUT CREEK AT LACKAWACK

Rondout creek above its junction with Sandberg creek (called also Lackawack creek) at Napanoch is essentially a mountain stream. At Honk falls a natural declivity affords a fall of 125 feet over tilted strata of Hudson river shale. This fall has been increased to 147.5 feet by the construction of a masonry dam at the head of the gorge.

On May 1, 1910, an automatic gage was established at Lackawack, which is situated a short distance above Honk falls, at which place a record was previously maintained. The records of flow at this gaging station have been furnished for publication by Mr. J. Waldo Smith, Chief Engineer of the Board of Water Supply of the city of New York.

Daily Discharge, in Second-feet, of Rondout Creek at Lackawack

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	150	620	166	1,188	442	105	68	40	45	27	18	82
2.....	147	398	152	2,088	350	98	147	38	39	24	34	81
3.....	170	321	226	1,260	312	92	97	35	44	22	26	78
4.....	148	398	172	824	285	160	78	33	44	22	28	*60
5.....	156	338	*168	654	648	154	63	33	40	22	28	47
6.....	141	264	164	522	780	108	76	36	35	21	28	38
7.....	130	248	162	510	510	92	84	35	34	18	25	62
8.....	121	216	152	†1,252	426	114	108	35	31	14	27	434
9.....	120	178	148	2,184	394	123	97	32	28	17	30	236
10.....	127	172	141	1,036	358	110	78	31	28	18	39	168
11.....	118	162	134	786	315	94	73	38	28	17	47	136
12.....	121	152	116	838	402	82	89	106	26	16	38	120
13.....	118	134	120	678	798	74	66	62	24	*18	34	111
14.....	116	132	121	550	466	70	59	45	24	18	42	166
15.....	114	130	152	522	378	73	127	37	23	18	36	113
16.....	112	129	192	625	330	71	103	35	22	52	113	125
17.....	111	125	176	580	318	65	86	34	24	100	95	130
18.....	110	121	192	535	273	60	118	38	23	60	86	132
19.....	108	120	236	585	228	58	92	84	22	94	76	164
20.....	106	116	218	1,204	211	74	71	73	21	90	76	156
21.....	105	114	162	1,084	190	63	54	127	21	62	68	136
22.....	103	113	158	702	180	65	59	102	21	49	62	147
23.....	134	111	154	522	168	66	56	66	20	32	57	145
24.....	172	110	162	434	158	100	*60	53	18	37	65	143
25.....	242	108	199	406	148	84	56	46	18	30	66	150
26.....	192	143	498	1,020	141	65	46	41	20	39	57	106
27.....	172	162	1,908	756	132	53	42	38	19	30	78	120
28.....	172	160	5,304	570	127	76	44	36	18	28	*99	164
29.....	242	......	2,196	506	114	94	53	41	19	29	81	176
30.....	470	......	1,330	522	116	78	46	65	21	29	76	216
31.....	590	......	1,108	......	111	......	41	59	......	32	......	188
Mean...	166	196	532	831	316	87	75	51	27	35	54	140

* Meter measurement. † Maximum crest flow of 6,312 sec.-ft. occurred on April 8 at 10:30 P. M. and was sustained for about 15 minutes.

NOTE.— Ice conditions prevailed from January 13 to 30, February 10 to 28, March 1 to 19 and December 23 to 31, inclusive.

Monthly Discharge of Rondout Creek at Lackawack

[Drainage area, 100 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	590	103	166	1.66	1.909
February	620	108	196	1.96	2.041
March	5,304	116	532	5.32	6.131
April	2,184	406	831	8.31	9.277
May	798	111	316	3.16	3.646
June	160	53	87	0.87	0.973
July	147	41	75	0.75	0.867
August	127	31	51	0.51	0.584
September	45	18	27	0.27	0.299
October	100	14	35	0.35	0.403
November	113	18	54	0.54	0.606
December	434	38	140	1.40	1.609
The year	5,304	14	209	2.09	28,345

ESOPUS CREEK

DESCRIPTION

Esopus creek has its source in Winnisook lake on the northwestern slope of Slide mountain, the highest peak of the Catskills.

From Big Indian to Olive Bridge the stream flows through a deep valley, flanked on both sides by timber-covered mountains. Numerous sites for dams or storage reservoirs are offered at points where the valley broadens out for a short distance to receive the inflowing waters of tributaries. The most notable are at Big Indian, where Birch creek enters; at the mouth of Bush kill, at Shandaken; at the mouth of Stone Clove creek, at Phœnicia; at Coldbrook, where Little Beaver kill enters, and at Olive Bridge. The stream channel is relatively broad and shallow. The bed is covered with cobbles and small boulders left behind after the erosion of drift deposits, which formerly filled the valley. The descent of the stream is rapid, though not precipitous, until Olive Bridge is reached. At this point the stream flows over a rock ledge in a narrow gorge, forming Bishop's falls. The natural fall is 22 feet and is increased to 28 feet by a timber dam on the crest of the ledge. This dam was originally constructed in 1828. The drainage basin of Esopus creek is mostly shown on the Rosendale, Slide Mountain, Phœnicia and the Kaaterskill quadrangles of the U. S. Geological Survey topographic maps. This stream is of great economical importance, owing to its relatively large yield and its location adjacent to the city of New York, and it has been adopted for the city's water supply. The Ashokan dam and reservoir are now in process of construction by the city. Ashokan dam crosses Esopus creek about one mile downstream from Bishop's falls.

ESOPUS CREEK AT MOUNT MARION

A gaging station was established on Esopus creek at Mount Marion on April 4, 1907, by the Board of Water Supply of the city of New York. The bed of the stream at this station is rock and flow is chiefly confined to a narrow, V-shaped, natural trough during low water. The channel is straight for a considerable distance above and below the bridge. The flow is confined to the main channel at all stages of the stream.

Records here published have been furnished by Mr. J. Waldo Smith, Chief Engineer of the Board of Water Supply.

Daily Discharge, in Second-feet, of Esopus Creek at Mount Marion

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	373	2,042	1,138	4,970	618	100	51	38	38	11	593	90
2	281	1,898	1,048	5,385	455	84	55	38	33	11	352	90
3	310	1,880	932	4,775	352	79	55	35	27	11	203	84
4	310	2,015	796	4,190	297	90	49	35	26	11	[illegible]	79
5	310	2,150	630	3,756	2,132	110	44	35	26	11	100	71
6	286	1,970	556	3,124	2,815	100	47	32	23	11	81	64
7	254	1,880	490	2,060	2,380	88	64	32	23	16	*63	67
8	254	1,315	410	1,862	2,150	79	64	32	20	16	57	77
9	218	1,005	375	3,795	1,970	96	*61	29	20	*16	59	90
10	176	1,005	544	3,244	1,862	77	49	26	20	11	74	84
11	130	963	490	2,870	1,790	69	44	26	20	11	43	*85
12	132	867	468	4,120	1,835	64	44	26	16	11	35	82
13	93	1,023	446	3,964	1,988	59	44	26	11	6	32	77
14	76	1,230	410	3,704	1,628	55	47	26	6	6	29	154
15	76	1,338	490	3,470	1,390	51	51	26	6	11	27	154
16	76	1,271	770	3,496	1,300	61	55	26	4	18	100	131
17	76	1,251	1,271	2,980	1,113	64	59	26	4	23	156	120
18	71	1,352	1,488	2,132	1,035	69	55	27	4	23	114	100
19	71	1,204	1,023	2,132	*1,011	110	49	23	6	31	88	74
20	71	1,170	885	2,650	670	90	44	18	6	35	79	74
21	71	1,170	730	3,886	455	81	41	18	6	35	74	84
22	71	1,107	569	3,665	242	77	38	13	6	35	59	71
23	71	1,048	535	3,366	176	71	39	6	6	32	55	62
24	67	990	545	3,124	147	61	41	4	*18	29	49	59
25	186	932	638	2,925	147	59	41	4	18	29	47	52
26	167	932	1,178	3,795	139	55	44	4	16	26	45	48
27	183	932	2,705	3,496	156	51	44	4	11	26	47	29
28	218	1,138	6,235	2,980	147	55	47	4	6	23	92	22
29	295	......	5,606	2,650	147	59	47	6	6	306	103	18
30	342	......	4,970	2,430	196	55	44	33	11	842	96	30
31	614	......	5,075	......	147	......	41	41	......	822	......	35
Mean	191	1,324	1,401	3,367	996	74	48	23	15	81	103	76

* Meter measurement.

NOTE.— Water was wasted through waste channel at headworks of Ashokan reservoir, as follows: Midnight, Dec. 31 to Jan. 9, 10 A. M.; 4 P. M., Jan. 31 to April 30, 1 P. M.; 6 P. M., May 4 to June 25, incl.; July 22 to 30, incl.; Oct. 26 to Nov. 17, incl. Flow through Beaverkill dike was stopped on June 6. June 5, gates of Winchell Falls forebay were opened for repairs and were closed at noon on June 15. Ice conditions prevailed from Jan. 2 to Jan. 8, and Jan. 11 to Jan. 31, and Feb. 16 to Mar. 17, incl.

Monthly Discharge of Esopus Creek at Mount Marion
[Drainage area, 386 square miles.]

1914	Discharge in Second-feet				Run-off
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	373	67	191	0.495	0.571
February	2,150	867	1,324	3.430	3.572
March	6,235	375	1,401	3.629	4.184
April	5,385	1,862	3,367	8.723	9.732
May	2,815	139	996	2.580	2.974
June	110	51	74	0.192	0.214
July	64	38	48	0.124	0.143
August	41	4	23	0.060	0.069
September	38	4	15	0.039	0.044
October	842	6	81	0.210	0.242
November	593	27	103	0.267	0.298
December	154	18	76	0.197	0.227
The year	6,235	4	633	1.640	1.891

ESOPUS CREEK AT COLDBROOK

On account of the impounding of water in the Ashokan reservoir, the records of stream flow at the weir near Olive Bridge have been discontinued and a new gaging station established at Coldbrook, which is located on the Esopus creek where it enters the Ashokan reservoir.

The records here published have been furnished by J. Waldo Smith, Chief Engineer, Board of Water Supply of New York city.

Daily Discharge, in Second-feet, of Esopus Creek at Coldbrook

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	150	1,214	200	1,806	1,086	183	87	62	71	24	28	186
2......	118	1,006	200	2,626	894	166	115	62	66	23	26	103
3......	176	694	211	2,070	790	150	95	62	62	21	25	190
4......	176	722	227	1,640	632	176	75	62	62	18	24	176
5......	168	614	227	1,300	1,134	176	62	60	62	16	38	190
6......	143	460	250	1,086	1,300	144	169	58	62	16	34	190
7......	109	518	274	1,054	1,134	121	136	58	58	14	30	190
8......	178	440	274	1,830	926	197	127	56	56	*23	26	260
9......	163	430	259	5,315	830	166	113	54	54	18	34	252
10......	150	387	266	2,530	715	127	103	52	52	16	32	210
11......	197	356	230	1,950	572	115	90	58	50	14	32	200
12......	156	336	284	1,926	846	107	85	124	50	12	32	172
13......	163	169	228	1,770	1,070	90	80	90	50	10	30	147
14......	124	203	200	1,500	894	85	75	75	48	8	30	391
15......	121	256	268	1,340	814	75	133	66	48	†14	32	268
16......	118	276	298	1,974	736	77	115	62	46	34	450	238
17......	115	296	416	1,540	662	75	95	62	46	85	238	224
18......	85	268	729	1,540	608	71	115	85	44	42	*163	176
19......	85	268	537	2,482	548	66	100	95	42	98	144	176
20......	83	210	387	5,058	475	115	87	100	40	77	*166	292
21......	102	276	405	3,965	410	103	80	136	38	50	127	256
22......	121	220	410	2,250	391	100	75	115	34	48	121	231
23......	100	256	412	1,740	348	98	71	105	26	46	110	153
24......	80	245	398	1,300	324	95	83	93	24	44	115	139
25......	238	169	336	1,230	292	83	75	83	40	42	110	127
26......	234	166	683	1,974	292	75	71	71	34	38	121	118
27......	260	210	2,402	1,470	316	71	64	62	26	34	231	103
28......	276	238	7,000	1,300	252	83	62	60	*24	32	242	105
29......	316	......	3,817	1,340	224	95	62	77	21	30	210	153
30......	490	......	2,418	1,340	210	90	62	105	28	30	183	234
31......	1,054	......	1,890	......	200	......	62	75	......	28	......	217
Mean...	195	389	843	2,008	643	112	91	77	45	32	106	199

* Meter measurement. † Two-meter measurement.

NOTE.— Ice conditions prevailed from Jan. 13 to 29, Feb. 12 to 28, Mar. 1 to 26 and Dec. 10 to 31, incl. Ice went out during night of March 26th. Maximum crest flow occurred at 5 P. M., March 28, 7,050 sec.-ft.

Monthly Discharge of Esopus Creek at Coldbrook

[Drainage area, 192 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January..........................	1,054	80	195	1.02	1.169
February.........................	1,214	166	389	2.02	2.110
March............................	7,000	200	843	4.38	5.060
April............................	5,315	1,054	2,008	10.46	11.682
May..............................	1,300	200	643	3.35	3.862
June.............................	197	66	112	0.58	0.652
July.............................	169	62	91	0.47	0.546
August...........................	136	52	77	0.40	0.460
September........................	71	21	45	0.23	0.266
October..........................	98	8	32	0.17	0.194
November.........................	450	24	106	0.55	0.616
December.........................	391	103	199	1.04	1.197
The year.........................	7,000	8	393	2.05	27.814

KINDERHOOK CREEK

Kinderhook creek is an interstate stream, with a drainage area of 337 square miles, having its source in the Hancock mountains in western Massachusetts, at an elevation of nearly 1,500 feet above tide, flowing southwestward through Columbia and Rensselaer counties, N. Y., and joining Claverack creek, about two miles from Hudson river, to form Stockport creek, through which it discharges into the Hudson, four miles north of the city of Hudson. Kinderhook creek is an important stream for power, with considerable amounts unutilized, and affords also some opportunities for storage.

KINDERHOOK CREEK AT ROSSMAN

Location.— On highway bridge at Rossman, N. Y., 3½ miles above the confluence of the creek, through Stockport creek, with Hudson river, 1 mile above the mouth of Claverack creek, which it joins to form Stockport creek, and 9 miles by road above the city of Hudson.

Records available.— March 17, 1906, to May 1, 1914.

Drainage area.— 331 square miles. (From U. S. Geological Survey water supply papers.)

Gage.— Tape-and-weight type attached to highway bridge; read twice daily; datum unchanged.

Control.— Rock with some soil on sides.

Discharge measurements.— Made from single-span steel highway bridge.

Regulation.— Low-water flow practically controlled by several power plants and paper mills above the station. Several small lakes also tend to affect low-water flow for short periods.

Winter flow.— Discharge relation affected by ice. Gage observations suspended during frozen periods.

Special studies.—A portable automatic gage was set up near the observer's gage and a continuous automatic record of gage heights was obtained from August 3 to August 12, and November 30 to December 5, 1912, and from May 31 to June 10, 1913. The true mean daily discharge was determined from hourly gage heights from the continuous record and was compared with the discharge obtained from semi-daily observations. It appeared that daily discharges computed from semi-daily observations were fairly good for discharges above 100 second-feet. The mean daily gage heights obtained from semi-daily observations are being published, together with estimates for the periods when the daily discharge is above 100 second-feet.

As a result of these studies the station was discontinued May 1, 1914, because funds are not available to operate a permanent automatic gage at this point.

Accuracy.— Open-channel discharge rating curve well defined. Accuracy of estimate depends entirely on accuracy of mean daily gage heights. See Special study.

No discharge measurements were made during 1914.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Daily Gage Height, in Feet, of Kinderhook Creek at Rossman

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	27.22	28.50	......	29.9	28.6	......	......	......	......	......	......	......
2......	27.16	28.30	......	31.0	......	......	......	......	......	......	......	......
3......	26.92	28.00	......	30.2	......	......	......	......	......	......	......	......
4......	27.04	28.00	......	29.5	......	......	......	......	......	......	......	......
5......	27.25	28.10	......	28.9	......	......	......	......	......	......	......	......
6......	27.15	27.70	......	28.6	......	......	......	......	......	......	......	......
7......	27.28	27.60	......	28.6	......	......	......	......	......	......	......	......
8......	27.28	27.45	27.70	29.2	......	......	......	......	......	......	......	......
9......	27.27	27.50	27.55	32.1	......	......	......	......	......	......	......	......
10......	26.98	27.60	27.48	30.3	......	......	......	......	......	......	......	......
11......	27.28	27.27	27.32	29.4	......	......	......	......	......	......	......	......
12......	27.14	27.38	27.02	29.3	......	......	......	......	......	......	......	......
13......	......	27.12	27.08	29.2	......	......	......	......	......	......	......	......
14......	......	27.05	26.82	28.7	......	......	......	......	......	......	......	......
15......	......	27.12	26.98	28.5	......	......	......	......	......	......	......	......
16......	......	27.09	27.02	28.7	......	......	......	......	......	......	......	......
17......	......	......	28.35	28.8	......	......	......	......	......	......	......	......
18......	......	......	29.90	28.6	......	......	......	......	......	......	......	......
19......	......	......	28.60	28.7	......	......	......	......	......	......	......	......
20......	......	......	28.10	29.7	......	......	......	......	......	......	......	......
21......	......	......	27.75	31.6	......	......	......	......	......	......	......	......
22......	......	......	27.75	29.9	......	......	......	......	......	......	......	......
23......	......	......	27.60	29.1	......	......	......	......	......	......	......	......
24......	......	......	28.00	28.8	......	......	......	......	......	......	......	......
25......	......	......	28.80	28.5	......	......	......	......	......	......	......	......
26......	......	......	31.60	28.9	......	......	......	......	......	......	......	......
27......	......	......	32.60	29.1	......	......	......	......	......	......	......	......
28......	27.80	......	33.30	28.6	......	......	......	......	......	......	......	......
29......	28.50	......	31.30	28.5	......	......	......	......	......	......	......	......
30......	28.70	......	30.20	28.7	......	......	......	......	......	......	......	......
31......	28.50	......	29.70	......	......	......	......	......	......	......	......	......

NOTE.— Discharge relation affected by ice, January 13 to 27 and February 17 to March 7. Station discontinued May 2, 1914.

Daily Discharge, in Second-feet, of Kinderhook Creek at Rossman

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	320	1,250	......	2,860	1,340	......	......	......	......	......	......	......
2	292	1,070	......	4,510	......	......	......	......	......	......	......	......
3	195	826	......	3,280	......	......	......	......	......	......	......	......
4	241	826	......	2,340	......	......	......	......	......	......	......	......
5	334	906	......	1,640	......	......	......	......	......	......	......	......
6	288	602	......	1,340	......	......	......	......	......	......	......	......
7	349	534	......	1,340	......	......	......	......	......	......	......	......
8	349	441	602	1,980	......	......	......	......	......	......	......	......
9	344	470	502	6,400	......	......	......	......	......	......	......	......
10	217	534	458	3,430	......	......	......	......	......	......	......	......
11	349	344	370	2,210	......	......	......	......	......	......	......	......
12	283	401	233	2,090	......	......	......	......	......	......	......	......
13	......	274	257	1,980	......	......	......	......	......	......	......	......
14	......	245	160	1,440	......	......	......	......	......	......	......	......
15	......	274	217	1,250	......	......	......	......	......	......	......	......
16	......	261	233	1,440	......	......	......	......	......	......	......	......
17	......	......	1,120	1,540	......	......	......	......	......	......	......	......
18	......	......	2,860	1,340	......	......	......	......	......	......	......	......
19	......	......	1,340	1,440	......	......	......	......	......	......	......	......
20	......	......	906	2,590	......	......	......	......	......	......	......	......
21	......	......	638	5,510	......	......	......	......	......	......	......	......
22	......	......	638	2,860	......	......	......	......	......	......	......	......
23	......	......	534	1,860	......	......	......	......	......	......	......	......
24	......	......	826	1,540	......	......	......	......	......	......	......	......
25	......	......	1,540	1,250	......	......	......	......	......	......	......	......
26	......	......	5,510	1,640	......	......	......	......	......	......	......	......
27	......	......	7,300	1,860	......	......	......	......	......	......	......	......
28	673	......	8,600	1,340	......	......	......	......	......	......	......	......
29	1,250	......	5,000	1,250	......	......	......	......	......	......	......	......
30	1,440	......	3,280	1,440	......	......	......	......	......	......	......	......
31	1,250	......	2,590	......	......	......	......	......	......	......	......	......

NOTE.— Daily discharge not given when it comes below 100 second-feet. See " Special study " in station description.

Monthly Discharge of Kinderhook Creek at Rossman
[Drainage area, 331 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January	1,440	....	394	1.19	1.37	C
February	1,250	....	405	1.22	1.27	C
March	8,600	160	1,670	5.05	5.82	C
April	6,400	1,250	2,230	6.74	7.52	B

NOTE.— Mean discharge estimated by comparison with nearby streams as follows: January 13 to 27, 269 second-feet; February 17 to 28, 173 second-feet; March 1 to 7, 853 second-feet.

PRECIPITATION RECORDS, LOWER HUDSON BASIN

The records here published have been furnished by J. Waldo Smith, Chief Engineer, Board of Water Supply of New York city.

CATSKILL WATERSHEDS

Monthly Rainfall, in Inches, on Catskill Watersheds

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
						Esopus Creek							
Phoenicia......	3.17	3.02	5.04	6.03	3.00	2.48	4.10	3.95	0.62	2.71	4.54	3.60	42.26
Slide Mountain.	4.26	2.81	3.98	5.48	2.72	4.27	2.97	4.18	1.14	2.84	3.64	6.43	44.72
Highmount....	2.64	2.20	4.66	5.84	3.50	4.14	2.87	4.03	1.04	2.61	2.46	3.16	39.15
Edgewood.....	3.62	2.28	3.58	6.99	2.99	3.05	4.69	3.68	0.61	2.77	3.88	2.99	41.13
Lake Hill......	3.46	2.04	2.90	6.16	3.52	3.19	3.09	3.56	0.38	2.65	3.39	3.59	37.93
Overlook Mt...	3.71	2.68	3.46	5.90	2.83	2.86	3.58	3.78	0.32	3.33	3.09	3.26	38.80
Kingston......	3.50	1.99	4.46	4.84	3.36	3.88	3.80	3.23	0.66	3.04	2.69	2.18	37.63
West Hurley...	2.83	2.37	3.98	5.42	2.75	2.50	4.05	2.82	0.37	2.88	2.83	2.74	35.54
Brown Station .	2.96	2.22	4.41	5.85	2.96	3.32	3.47	3.62	0.31	3.57	3.22	3.04	38.95
Astoken.......	3.66	2.48	4.29	5.57	2.96	2.20	3.12	3.62	0.35	3.55	3.12	3.34	38.26
*Moonkaw Lodge.......	3.64	2.32	3.93	6.16	2.64	3.80	2.98	5.88	0.42	2.78	2.98	4.71	42.24
						Rondout Creek							
Grahamsville...	3.74	2.01	3.60	5.08	3.24	4.66	4.16	4.57	1.05	2.86	2.86	3.63	41.26
Sundown......	2.80	2.18	3.31	4.34	1.77	3.34	2.70	4.00	0.71	1.55	2.71	3.26	32.67
Peekamoose....	3.76	2.55	3.44	4.42	3.55	4.65	3.95	4.06	0.43	3.47	3.38	6.09	43.75
Lackawack....	2.85	1.94	3.62	5.06	3.69	4.42	5.30	2.58	0.32	3.14	2.49	3.00	38.41
Claryville.....	3.48	1.98	3.88	5.64	2.64	4.34	4.21	5.48	1.06	2.17	2.44	3.10	40.42
High Falls.....	2.42	3.20	4.51	5.30	3.67	2.66	3.42	2.84	0.26	3.74	2.88	2.80	37.70
						Schoharie Creek							
Windham.....	2.56	2.20	4.96	4.93	3.24	3.26	4.15	4.90	0.88	1.64	2.15	3.18	38.05
Haines Falls...	2.40	2.19	3.74	5.97	3.05	2.36	3.89	4.57	0.40	2.61	4.48	2.56	38.22
Lexington.....	2.08	2.35	4.49	4.70	3.12	2.86	4.28	5.20	1.00	1.78	2.34	2.44	36.64
Prattsville.....	2.08	2.36	4.84	5.27	3.66	3.38	4.57	4.18	1.19	1.70	1.90	2.32	37.45
						Catskill Creek							
Preston Hollow.	1.68	2.08	4.76	5.18	3.36	2.42	4.22	3.30	0.63	1.34	2.44	2.15	33.56
Oak Hill......	1.90	2.18	4.81	5.02	3.86	2.02	3.56	3.76	0.48	1.62	3.13	3.09	35.43
Franklinton....	2.12	2.27	5.08	6.01	2.62	2.56	4.12	4.36	0.76	1.50	2.07	1.98	35.45
Westerlo......	2.24	1.96	4.30	5.48	3.24	2.22	3.78	4.60	0.47	1.54	2.65	1.74	34.22

* Rain gage removed from Maltby Hollow (El. 915) to Watson Hollow, 2 miles distant (El. 1,000), on Nov. 30, 1913.

Mean Monthly Rainfall, in Inches, on Catskill Watersheds

YEAR	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total for year
Esopus Creek — Above Olive Bridge Dam													
1906..........	2.85	2.26	4.80	3.85	5.01	6.16	4.42	3.76	3.18	5.47	2.26	4.08	48.10
1907..........	2.59	1.66	1.20	2.17	3.83	3.45	3.13	1.17	11.49	6.78	7.06	5.80	50.33
1908..........	3.49	6.40	2.93	2.98	9.23	2.29	6.32	2.04	2.46	4.21	0.57	2.58	45.50
1909..........	4.82	6.97	4.35	5.20	4.48	4.38	2.06	4.83	4.17	1.40	1.98	4.63	49.27
1910..........	7.61	4.37	0.93	10.18	2.95	4.59	2.02	3.93	5.21	1.02	3.70	2.30	48.81
1911..........	2.60	1.94	3.90	2.37	1.06	5.94	3.19	4.83	4.25	7.50	3.50	2.91	43.99
1912..........	2.38	2.96	5.96	5.76	4.36	1.72	3.25	7.47	3.44	4.84	4.08	4.70	50.92
1913..........	4.26	2.28	7.70	3.81	3.74	1.01	1.90	4.86	4.02	6.76	5.60	2.93	48.87
1914..........	3.40	2.44	4.02	5.94	2.99	3.18	3.49	3.91	0.56	2.97	3.32	3.69	39.91
Mean..........	3.78	3.48	3.98	4.70	4.18	3.64	3.31	4.09	4.31	4.55	3.56	3.74	47.30
Rondout Creek — Above Honk Falls and Lackawack													
1906..........	2.69	2.64	3.91	4.54	4.34	5.23	5.51	4.47	3.87	4.40	2.15	4.20	47.95
1907..........	3.43	1.93	1.93	2.19	3.68	3.69	2.95	1.88	9.42	5.50	6.32	5.03	47.95
1908..........	3.12	6.24	3.53	4.02	7.64	1.75	5.08	2.59	2.64	3.74	0.72	3.09	44.16
1909..........	4.82	6.61	3.99	4.71	3.36	4.39	2.07	4.46	3.54	1.25	1.86	4.47	45.53
1910..........	7.07	4.53	1.03	8.30	3.60	4.22	2.34	4.08	5.25	1.18	3.36	2.25	47.21
1911..........	3.44	1.99	4.42	3.11	1.16	6.57	3.27	5.14	4.17	7.10	3.43	3.08	46.88
1912..........	2.24	2.41	5.86	5.77	3.59	1.91	2.82	7.32	3.79	3.92	3.02	4.78	47.43
1913..........	5.05	2.61	7.65	4.67	3.46	1.44	3.38	6.04	4.20	6.53	4.74	2.72	52.49
1914..........	3.33	2.13	3.57	4.91	2.98	4.28	4.06	4.14	0.71	2.64	2.74	3.82	39.31
Mean..........	3.91	3.45	3.99	4.69	3.76	3.72	3.50	4.46	4.18	4.03	3.15	3.72	46.55
Schoharie Creek — Above Prattsville													
1907..........	2.05	1.54	1.04	2.33	3.46	3.27	3.28	0.76	8.29	5.51	6.08	4.66	42.27
1908..........	2.93	5.51	2.31	2.68	7.53	2.22	4.36	2.32	2.82	4.31	0.44	2.01	39.44
1909..........	4.12	4.82	3.38	4.47	4.24	4.19	1.53	3.23	3.17	1.35	1.85	4.14	40.49
1910..........	6.67	3.42	0.62	7.76	3.07	5.03	1.54	2.23	4.22	0.80	4.94	1.45	41.75
1911..........	1.85	1.13	2.13	1.43	1.43	6.09	2.06	4.16	3.21	4.68	1.99	1.79	31.95
1912..........	1.66	2.14	4.06	4.88	3.64	1.52	2.60	3.84	3.48	3.31	3.14	2.86	37.13
1913..........	2.78	2.00	5.24	3.22	3.05	1.58	1.46	3.56	3.16	5.34	5.59	1.94	38.92
1914..........	2.28	2.28	4.50	5.22	3.27	2.96	4.22	4.71	0.87	1.95	2.72	2.62	37.58
Mean..........	3.04	2.86	2.91	4.00	3.71	3.36	2.63	3.10	3.65	3.40	3.34	2.68	38.68
Catskill Creek — Above Oak Hill													
1907..........	1.92	1.28	1.16	2.38	3.25	3.15	3.31	0.85	6.58	4.18	4.91	3.52	36.49
1908..........	2.43	4.01	1.83	2.15	5.86	1.58	4.00	3.01	1.59	3.35	0.39	1.57	31.77
1909..........	3.56	3.76	2.79	3.00	3.92	3.52	2.36	2.47	2.74	0.96	1.50	3.59	34.17
1910..........	4.67	3.02	0.48	5.70	2.94	4.82	1.21	1.55	4.07	0.91	3.57	0.92	33.86
1911..........	1.32	1.13	2.07	1.55	1.41	7.06	2.20	3.38	2.94	4.32	1.45	1.87	30.70
1912..........	1.71	2.12	3.50	4.50	3.36	1.08	2.63	3.80	3.27	3.86	2.78	2.37	34.98
1913..........	2.66	1.87	4.60	3.05	3.18	2.16	1.83	1.37	2.67	4.89	4.73	1.83	34.84
1914..........	2.10	2.14	4.78	5.32	3.26	2.50	3.97	4.18	0.64	1.53	2.49	2.43	35.34
Mean..........	2.55	2.42	2.65	3.46	3.40	3.23	2.69	2.58	3.06	3.00	2.73	2.26	34.02

Note for Esopus creek.— Jan., 1906, to Nov., 1906, inclusive, average of six stations. Dec.' 1906, average of 7 stations. Jan., 1907, to June, 1907, inclusive, average of 8 stations. July 1907, and Aug., 1907, average of 11 stations. Sept., 1907, to Dec., 1909, inclusive, average of 12 stations. Jan., 1910, average of 11 stations. Feb., 1910, and Mar., 1910, average of 12 stations. April, 1910, to Dec., 1914, inclusive, average of 10 stations.

Note for Rondout creek.— Jan., 1906, to Dec., 1906, inclusive, average of 4 stations. Jan., 1907, to Mar., 1910, inclusive, average of 6 stations. April, 1910, to Dec., 1914, inclusive, average of 5 stations.

Note for Schoharie creek.— Jan., 1907, to June, 1907, inclusive, average of 6 stations. July, 1907, to Dec., 1907, inclusive, average of 7 stations. Jan., 1908, to Mar., 1910, inclusive, average of 5 stations. April, 1910, to Dec., 1914, inclusive, average of 4 stations.

Note for Catskill creek.— Jan., 1907, to Dec., 1907, inclusive, average of 6 stations. Jan., 1908, to Dec., 1914, inclusive, average of 5 stations.

WATERSHEDS AT LARGE

Monthly Rainfall, in Inches, on Various Watersheds

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
						Roeliff Jansen Kill							
Silvernails.....	2.34	1.56	6.45	5.19	2.30	2.61	3.95	4.04	0.66	2.72	2.16	2.18	36.15
						Wappinger Creek							
Pleasant Valley.	2.82	2.18	3.69	4.96	3.42	2.51	3.90	2.99	0.28	3.32	2.73	3.40	36.20
						Peekskill Creek							
Cold Spring....	......	......	6.37	4.74	3.01	2.90	5.37	2.19	0.32	2.90	3.83	4.42	......
Peekskill......	3.75	1.88	2.97	4.76	3.53	3.26	6.18	2.42	0.38	3.45	3.64	4.45	40.67
						Wallkill River							
New Paltz.....	2.86	2.90	4.33	4.86	3.04	3.16	3.96	3.22	0.16	3.31	2.46	3.16	37.42
Walden.......	......	......	......	*2.11	2.21	2.33	1.98	2.21	0.44	3.64	2.65	2.06	......
						Moodna Creek							
Cornwall......	2.72	2.37	5.83	2.80	2.46	3.18	4.30	1.78	0.35	2.90	5.16	4.38	38.23

* 4 days missing.

UPPER HUDSON RIVER DRAINAGE BASIN

UPPER HUDSON RIVER WATER-SURFACE RECORDS

The following tables give records of the daily elevation of water-surface for 1914, proceeding upstream from the State dam at Troy to Corinth.

Daily Elevation of Water-surface (B. C. Datum) of Hudson River above State Dam at Troy

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	14.92	15.57	15.57	19.77	18.37	15.67	14.92	14.72	14.52	14.72	14.82	15.57
2.....	15.12	15.67	15.62	19.92	18.07	14.17	15.07	14.77	14.17	14.82	14.67	15.97
3.....	15.32	15.77	15.42	20.07	18.17	13.87	15.72	14.82	14.22	15.12	14.52	15.57
4.....	15.12	15.57	15.07	18.67	17.92	13.87	15.27	14.87	14.27	15.57	14.57	16.02
5.....	15.17	15.62	14.67	18.07	17.77	13.77	15.22	14.87	14.27	15.47	14.52	16.32
6.....	15.27	15.37	14.82	17.52	17.87	13.72	15.17	14.67	14.27	15.47	14.57	16.32
7.....	15.42	15.22	14.87	17.17	17.97	13.72	15.27	14.57	14.22	15.27	14.67	16.22
8.....	15.47	15.37	14.77	17.07	17.82	13.87	15.27	14.77	14.17	15.02	14.47	15.67
9.....	15.57	15.62	14.82	20.77	17.62	14.17	15.32	14.92	14.67	14.92	15.07	15.62
10.....	15.67	15.82	15.12	20.07	17.62	14.37	15.27	14.72	14.62	14.72	14.97	15.77
11.....	15.27	15.87	15.27	19.07	17.37	14.47	15.37	14.92	14.62	14.92	14.77	15.67
12.....	14.82	15.77	15.42	18.57	17.47	14.67	15.47	15.12	14.67	14.77	15.07	15.57
13.....	14.92	15.67	15.47	18.52	17.67	15.02	15.47	14.82	15.17	15.02	14.97	15.67
14.....	15.17	15.67	15.52	17.87	17.27	14.57	15.32	14.82	14.57	15.22	14.92	15.47
15.....	15.07	15.37	15.57	17.57	17.22	14.57	15.27	15.02	14.67	15.57	15.32	16.12
16.....	15.07	15.42	15.87	17.62	17.12	14.32	15.32	15.12	14.87	15.32	15.22	15.97
17.....	15.12	15.47	16.17	17.72	16.82	13.87	15.27	14.62	15.02	15.52	15.22	15.42
18.....	15.27	15.42	15.92	17.72	17.07	13.72	15.22	14.67	15.02	15.57	16.17	15.37
19.....	15.47	15.42	15.92	17.87	17.27	13.42	15.17	14.82	14.87	15.67	16.17	15.42
20.....	14.92	15.27	15.87	19.37	17.57	13.87	14.92	14.77	14.92	15.77	15.72	15.42
21.....	14.82	15.52	15.92	22.02	17.67	13.62	15.02	15.07	15.12	15.27	16.72	15.42
22.....	14.42	15.32	16.37	21.57	17.32	14.07	14.92	15.27	14.82	15.17	15.87	15.17
23.....	14.72	15.57	19.02	20.07	17.42	14.37	14.92	15.47	14.97	15.02	15.72	15.22
24.....	14.87	15.72	21.12	19.07	17.17	13.82	14.97	15.27	14.92	15.02	15.72	15.27
25.....	14.92	15.72	21.02	18.22	16.87	13.22	14.72	15.27	14.92	15.07	15.57	15.42
26.....	14.97	15.52	16.82	17.87	16.97	13.22	15.17	15.37	14.72	15.17	15.37	15.27
27.....	14.97	15.22	16.32	18.67	17.17	13.47	15.02	15.12	14.37	14.87	15.42	15.42
28.....	15.07	15.62	16.12	18.37	17.17	13.52	14.87	15.12	14.07	14.82	15.52	15.42
29.....	15.17	......	16.42	18.17	17.32	13.67	14.97	14.77	14.17	14.97	15.92	15.47
30.....	15.27	......	16.32	17.92	17.32	13.67	14.82	14.12	14.37	14.87	16.07	15.42
31.....	15.57	......	16.27	......	17.27	......	14.82	15.22	......	15.02	......	15.32

For elevation of water-surface below dam at Troy, see page 195.

Daily Elevation of Water-surface (B. C. Datum) of Hudson River below Dam of Adirondack Electric Power Corporation (Lower Dam), Mechanicville

1914	Jan.*a*	Feb.*a*	Mar.*a*	April*a*	May*a*	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	......	*a*	31.81	31.41	33.56	31.26	29.91	31.86
2	......	......	......	......	......	*a*	31.91	30.46	33.16	31.31	30.36	31.56
3	......	......	......	......	......	*a*	34.41	31.81	32.51	31.46	30.06	31.81
4	......	......	......	......	......	*a*	32.56	31.31	32.21	30.76	30.16	32.01
5	......	......	......	......	......	*a*	31.66	31.46	32.81	31.31	30.36	32.01
6	......	......	......	......	......	*a*	32.56	31.01	31.36	31.01	29.86	31.56
7	......	......	......	......	......	*a*	32.51	31.31	32.06	31.71	30.16	32.06
8	......	......	......	......	......	31.51	32.41	31.46	31.41	31.96	30.01	31.86
9	......	......	......	......	......	31.61	32.36	31.16	32.16	30.41	30.21	31.26
10	......	......	......	......	......	31.31	32.46	31.71	31.81	30.21	30.21	31.76
11	......	......	......	......	......	31.56	32.46	31.41	32.21	29.71	30.26	31.21
12	......	......	......	......	......	31.01	31.86	31.71	31.01	30.06	30.36	31.06
13	......	......	......	......	......	31.01	32.56	31.56	30.96	30.16	30.26	30.61
14	......	......	......	......	......	31.51	32.61	31.71	31.76	29.91	30.26	31.36
15	......	......	......	......	......	31.46	32.91	31.71	31.96	30.11	30.21	30.86
16	......	......	......	......	......	31.36	32.46	31.06	31.56	30.26	30.76	30.61
17	......	......	......	......	......	31.81	31.81	31.16	31.41	29.96	30.46	30.51
18	......	......	......	......	......	30.21	32.21	31.21	31.46	30.16	32.26	30.51
19	......	......	......	......	......	30.61	31.06	31.66	31.21	29.76	32.01	30.51
20	......	......	......	......	......	31.21	32.31	31.71	30.96	29.86	32.16	30.21
21	......	......	......	......	......	31.26	32.26	31.76	31.76	29.96	31.26	30.31
22	......	......	......	......	......	31.16	31.66	31.81	31.51	30.41	30.81	30.61
23	......	......	......	......	......	32.01	31.56	31.56	31.46	30.31	31.36	30.86
24	......	......	......	......	......	31.66	31.36	32.26	31.51	30.56	31.21	30.86
25	......	......	......	......	......	31.96	31.26	32.56	31.11	29.56	30.66	30.06
26	......	......	......	......	......	32.01	31.01	32.41	30.81	30.51	30.81	30.26
27	......	......	......	......	......	31.61	31.46	31.46	30.91	30.36	30.26	30.06
28	......	......	......	......	......	31.01	31.66	31.61	31.61	30.21	31.11	30.31
29	......	......	......	......	......	31.06	31.36	32.21	32.31	29.71	30.96	30.36
30	......	......	......	......	......	31.61	31.36	31.61	31.46	29.91	31.61	30.51
31	......	......	......	......	......	......	31.16	34.01	......	29.96	......	30.81

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Hudson River above Dam of Adirondack Electric Power Corporation (Lower Dam), Mechanicville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	49.25	49.45	49.20	51.15	52.75	49.50	50.00	48.05	49.40	49.35	49.30	49.15
2	49.15	49.25	49.45	52.60	52.30	48.65	49.60	49.05	49.30	49.40	49.45	49.30
3	49.20	48.95	49.95	52.15	51.70	49.40	40.20	49.30	49.25	49.40	49.40	49.35
4	49.05	49.25	49.35	51.65	51.20	49.25	49.90	49.30	49.45	49.35	49.20	49.45
5	49.40	49.40	49.30	51.45	50.75	49.55	49.90	49.05	49.35	49.30	49.35	49.25
6	49.20	49.60	49.25	51.10	51.10	49.55	50.05	49.30	49.20	48.75	49.20	49.15
7	49.10	48.85	49.35	50.75	50.90	49.20	49.95	49.30	49.35	49.55	49.15	49.40
8	49.30	49.00	49.20	50.95	50.70	49.40	49.85	49.15	49.40	48.25	49.40	49.55
9	49.30	49.00	49.30	53.35	50.20	49.50	49.95	49.20	49.40	48.35	49.30	49.30
10	49.25	48.00	49.00	52.65	49.55	49.30	49.90	49.50	49.40	48.95	49.35	49.25
11	49.30	48.90	49.20	52.25	49.75	49.40	49.90	49.35	49.35	49.45	49.40	49.35
12	49.25	49.25	49.05	52.05	49.10	49.55	49.95	49.35	49.30	49.40	49.30	49.25
13	49.10	49.05	48.70	51.95	49.65	47.95	50.00	49.30	49.20	49.45	49.25	49.30
14	49.10	49.20	49.05	51.75	49.40	49.60	50.15	49.35	49.35	49.35	49.25	49.45
15	49.20	49.05	48.95	51.40	49.60	49.75	49.95	49.30	49.40	49.30	49.20	49.40
16	49.25	49.35	48.90	51.45	48.95	48.60	49.95	49.15	49.30	49.25	49.20	49.40
17	49.30	49.30	48.95	51.35	48.70	49.85	49.85	49.30	49.35	49.25	49.25	49.15
18	49.30	49.20	49.65	51.20	48.55	48.75	50.15	49.35	49.40	49.40	49.35	49.20
19	49.25	49.35	48.90	51.50	48.35	50.05	49.75	49.20	49.45	49.35	49.45	49.40
20	49.50	49.25	48.85	53.55	47.85	50.05	50.20	49.20	49.35	49.20	49.25	49.35
21	49.45	49.30	48.35	55.20	48.60	48.35	50.00	49.40	49.45	49.45	49.10	49.50
22	49.35	48.75	47.50	55.00	49.40	49.65	50.05	49.40	49.30	49.45	49.10	49.35
23	49.20	49.55	48.35	54.15	49.10	50.00	50.05	49.35	49.35	49.30	49.45	49.45
24	49.40	49.20	48.00	53.40	48.70	49.85	49.90	49.35	49.40	49.50	49.35	49.30
25	48.80	49.40	48.10	52.60	49.65	49.95	49.95	49.35	49.45	49.40	49.40	49.30
26	49.50	49.35	49.15	52.10	49.10	49.85	49.90	49.40	49.30	49.45	49.30	49.40
27	49.10	49.40	50.15	52.30	48.95	50.05	50.15	49.40	49.40	49.30	49.45	49.45
28	49.45	49.20	51.65	52.20	49.30	49.85	50.05	49.20	49.20	49.35	49.40	49.40
29	49.30	......	51.35	52.15	49.30	50.10	49.90	49.00	49.20	49.30	49.20	49.15
30	49.45	......	51.05	52.50	49.10	49.90	50.15	49.25	49.45	49.25	49.45	48.75
31	49.35	......	51.00	......	48.60	......	50.05	49.70	......	49.30	......	49.30

Daily Elevation of Water-surface (B. C. Datum) of Hudson River at Toll Bridge, Mechanicville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	49.57	50.72	49.77	53.22	54.97	50.12	50.52	50.42	50.17	49.82	49.57	49.82
2......	49.22	50.42	50.42	55.02	54.52	49.42	50.32	49.87	50.12	49.87	49.65	49.87
3......	49.12	50.32	50.92	54.47	53.72	50.17	50.52	49.77	49.82	49.82	49.65	49.77
4......	49.07	50.37	50.62	53.87	53.22	49.92	50.27	49.77	49.92	49.77	49.60	49.77
5......	49.52	50.67	50.42	53.42	52.77	50.17	50.37	49.67	49.82	49.72	49.60	49.87
6......	49.52	50.47	50.37	53.12	53.07	50.17	50.77	49.82	49.62	49.87	49.65	49.57
7......	49.67	50.07	50.12	52.57	52.77	49.82	50.42	49.87	49.77	49.92	49.55	49.57
8......	49.87	49.47	49.57	52.82	52.62	50.07	50.27	49.92	49.82	48.47	49.55	49.37
9......	50.17	49.52	50.07	55.92	52.17	50.17	50.37	49.72	49.82	48.67	49.70	49.32
10......	50.12	49.57	49.77	55.27	51.52	49.97	50.42	49.77	49.87	49.27	49.85	49.57
11......	49.62	49.52	49.77	54.62	51.37	49.92	50.37	49.82	50.02	49.57	49.90	49.30
12......	49.67	49.47	49.67	54.37	51.17	50.02	50.27	49.87	50.07	49.87	49.80	49.40
13......	50.17	49.42	49.82	54.07	51.17	48.92	50.62	49.87	49.82	49.92	49.70	49.40
14......	50.12	*a*	49.97	53.57	51.32	50.12	50.62	49.92	49.97	49.82	49.75	49.50
15......	50.12	49.22	49.52	53.37	51.27	49.92	50.67	49.72	49.92	49.72	49.85	49.60
16......	50.02	49.37	49.42	53.37	50.82	50.17	50.52	49.42	49.67	49.77	49.70	49.60
17......	49.97	49.37	50.37	53.32	50.72	50.37	50.42	49.57	49.57	49.87	49.50	49.55
18......	49.67	49.37	51.57	53.32	50.57	49.12	50.57	49.57	49.87	49.77	49.65	49.60
19......	49.87	49.37	50.77	53.92	50.42	50.07	50.17	49.77	49.82	49.57	49.80	49.50
20......	49.97	49.37	50.37	56.07	49.87	50.42	50.47	49.87	49.82	49.72	49.70	49.40
21......	50.02	49.37	49.82	58.12	50.02	48.62	50.42	49.87	49.87	49.70	49.60	49.40
22......	50.17	49.27	48.77	58.02	50.32	50.12	50.52	49.87	49.77	49.80	49.70	49.50
23......	50.12	49.37	49.62	57.02	49.97	50.67	50.47	49.77	49.82	49.87	49.90	49.55
24......	49.97	49.67	49.47	55.92	49.87	50.42	50.47	49.87	50.02	49.90	49.80	49.60
25......	49.37	50.07	49.42	55.07	50.67	50.27	50.62	49.87	49.77	49.80	49.50	49.35
26......	49.72	50.27	50.72	54.27	50.27	50.57	50.27	49.82	49.77	49.75	49.40	49.00
27......	49.97	50.87	52.12	54.62	49.77	50.52	50.62	49.67	49.47	50.00	48.95	48.90
28......	50.42	50.47	53.77	54.47	50.17	50.52	50.62	49.72	49.37	49.75	49.00	48.80
29......	50.37	......	53.42	54.27	50.22	50.47	50.67	49.67	49.67	49.60	49.60	48.80
30......	50.72	......	53.12	54.97	49.97	50.27	50.62	49.77	49.87	49.65	49.70	48.70
31......	50.62	......	53.02	......	49.37	......	50.47	50.27	......	49.70	......	48.80

Daily Elevation of Water-surface (B. C. Datum) of Hudson River at B. & M. R. R. Bridge, Mechanicville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	70.20	72.75	69.05	71.60	72.70	67.75	66.90	66.70	68.25	67.80	67.45	67.60
2......	69.60	72.20	71.00	72.80	72.40	67.30	67.10	66.70	68.50	67.70	66.95	67.95
3......	67.55	71.90	70.50	72.40	71.50	67.50	67.80	66.90	68.10	67.55	66.20	67.90
4......	68.30	72.10	70.10	72.05	70.90	66.20	67.90	66.70	68.30	67.65	66.00	68.10
5......	68.80	71.30	69.50	71.80	71.20	66.00	68.00	66.85	68.60	67.60	66.30	68.20
6......	68.80	70.55	68.80	71.25	71.25	66.35	67.20	66.70	69.00	67.45	66.20	68.10
7......	70.00	70.60	68.50	71.05	71.05	68.40	67.10	66.90	69.00	67.50	66.30	68.10
8......	69.90	71.20	68.20	71.20	70.90	67.80	66.10	67.00	66.20	67.55	66.30	68.20
9......	70.00	70.50	69.00	73.20	70.80	67.60	67.60	67.70	67.70	67.70	66.35	65.90
10......	70.10	69.85	68.60	72.70	70.60	67.40	67.20	67.20	67.80	67.65	66.35	67.80
11......	70.20	69.60	68.45	72.15	70.10	67.50	67.10	67.20	67.60	68.00	66.65	67.90
12......	69.70	69.50	68.55	72.60	69.95	67.60	68.60	67.30	67.70	67 65	66.70	68.70
13......	69.80	70.00	68.65	72.10	70.00	67.50	67.60	67.50	68.00	68.20	66.90	69.10
14......	70.10	69.60	68.50	71.60	69.90	66.80	67.60	67.70	67.60	68.10	66.80	67.30
15......	68.35	69.80	69.55	71.50	69.70	67.60	67.50	67.70	67.50	68.65	67.80	67.00
16......	67.00	69.15	67.85	71.45	69.50	67.50	67.30	67.80	67.80	68.65	67.65	67.80
17......	67.00	69.30	69.00	71.30	70.30	67.30	67.50	67.50	65.65	68.95	67.80	67.30
18......	68.85	68.90	70.60	70.85	69.60	66.20	67.60	66.90	67.55	69.15	67.35	67.50
19......	68.25	68.70	68.85	71.15	69.45	66.80	68.35	66.90	67.80	68.65	67.50	68.90
20......	67.60	68.60	68.75	73.80	69.00	67.20	67.80	67.20	68.35	68.25	67.75	68.80
21......	67.90	69.30	68.80	75.60	68.60	66.00	67.70	67.60	67.65	68.05	68.05	67.80
22......	68.40	68.90	69.05	75.30	68.45	66.30	67.40	67.50	67.45	67.90	68.20	67.90
23......	68.95	68.80	67.70	74.60	68.30	66.30	66.80	68.00	66.90	67.70	67.20	68.90
24......	69.60	68.85	68.20	73.90	69.20	66.30	66.30	67.60	67.55	67.75	66.65	69.15
25......	69.40	68.75	68.70	72.55	68.10	66.30	66.30	68.00	67.65	68.05	67.00	69.30
26......	70.00	68.70	70.30	72.60	68.00	66.30	67.60	67.60	67.60	68.00	66.90	69.30
27......	69.80	68.95	71.20	72.25	67.85	66.30	66.10	67.80	68.95	67.60	66.75	69.35
28......	69.85	69.15	72.45	72.00	67.80	66.10	67.30	68.00	68.55	67.70	69.10	68.65
29......	70.20	......	72.20	72.60	67.70	66.00	65.90	67.50	68.35	66.00	69.10	68.45
30......	70.55	......	71.30	72.85	67.70	66.40	65.90	68.80	68.20	66.20	66.85	68.60
31......	71.20	......	71.05	......	*a*	......	65.90	68.60	......	66.30	......	68.25

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Hudson River below Dam at Stillwater

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	76.73	76.93	76.21	78.88	80.53	76.13	75.43	75.93	76.68	75.73	75.73	76.53
2......	76.61	76.68	76.23	79.83	80.51	76.01	75.51	75.93	76.48	75.73	75.63	76.53
3......	76.53	76.53	76.51	79.73	80.33	76.05	75.43	76.03	76.33	75.73	75.73	76.63
4......	76.53	76.53	76.53	79.55	79.11	76.11	75.45	76.03	76.23	75.73	75.63	76.68
5......	76.51	76.45	76.61	79.43	78.78	76.01	75.73	76.03	76.23	75.63	75.63	76.88
6......	76.41	76.33	76.81	79.33	78.53	75.93	75.91	75.93	76.18	75.73	75.73	77.03
7......	76.35	76.25	76.68	79.03	78.43	75.83	75.93	75.93	76.08	75.63	75.63	77.18
8......	76.28	76.28	76.63	78.85	78.28	75.98	76.03	75.93	76.03	75.73	75.63	77.08
9......	76.33	76.25	76.53	80.33	78.08	76.05	76.03	76.03	76.13	75.73	75.68	76.88
10......	76.43	76.23	76.53	80.35	77.93	76.08	76.11	75.98	76.23	75.63	75.73	76.63
11......	76.18	76.13	76.53	80.13	77.93	76.03	76.23	75.93	76.13	75.83	75.73	76.58
12......	76.05	75.95	76.45	79.85	77.83	75.88	76.23	75.93	76.03	75.88	75.63	76.53
13......	75.93	75.93	76.43	79.68	77.91	76.01	76.28	75.93	75.95	75.73	75.73	76.53
14......	75.93	75.93	76.43	79.61	77.91	75.93	76.11	75.83	75.93	75.63	75.73	76.58
15......	75.93	75.93	76.43	79.33	77.85	76.11	75.98	75.83	76.08	75.63	76.08	76.43
16......	75.98	75.93	76.63	79.33	77.58	76.23	75.83	75.73	75.98	75.53	75.68	76.33
17......	76.13	75.93	76.98	79.25	77.53	76.13	75.83	75.83	75.93	75.53	76.03	76.28
18......	76.33	75.88	77.36	79.13	77.43	76.13	75.78	75.73	75.93	75.68	76.53	76.18
19......	76.43	75.93	77.33	79.48	77.33	76.03	76.03	75.63	75.73	75.73	76.68	76.13
20......	76.43	76.03	77.25	80.63	77.03	76.01	76.03	75.83	75.73	75.63	76.48	76.03
21......	76.28	76.13	77.23	82.05	76.73	75.73	76.13	75.93	75.83	75.63	76.25	76.08
22......	76.23	76.13	77.03	82.23	76.48	75.58	76.23	76.01	75.73	75.63	76.18	75.93
23......	76.28	76.13	76.78	81.78	76.35	75.63	76.08	75.88	75.73	75.78	76.03	75.88
24......	76.55	76.03	76.65	80.93	76.33	75.63	75.93	75.85	75.73	75.83	76.13	75.78
25......	76.43	76.03	76.33	80.43	76.45	75.55	75.93	76.01	75.83	75.73	75.98	75.63
26......	76.43	75.95	76.69	80.18	76.33	75.41	76.03	76.03	75.83	75.78	75.93	75.63
27......	76.53	76.13	77.23	80.03	76.35	75.25	76.13	75.95	75.83	75.73	75.93	75.98
28......	76.45	76.13	77.76	79.95	76.43	75.35	76.03	75.98	75.98	75.73	75.93	76.23
29......	76.55	......	78.53	80.03	76.28	75.33	75.93	76.13	75.93	75.68	75.83	76.33
30......	76.63	......	78.78	80.33	76.13	75.43	75.93	76.05	75.83	75.63	76.08	76.43
31......	76.78	......	78.73	......	75.95	......	75.93	76.03	......	75.73	......	76.53

Daily Elevation of Water-surface (B. C. Datum) of Hudson River at Highway Bridge, Stillwater

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	85.30	85.51	83.74	86.99	88.19	84.39	83.74	83.79	84.79	83.79	83.79	84.44
2......	85.27	85.49	83.89	87.44	88.11	84.14	83.97	83.79	84.99	83.79	83.89	84.49
3......	85.09	85.49	84.11	87.59	87.69	84.09	84.09	83.69	85.04	83.79	83.84	84.64
4......	85.01	85.24	84.24	87.21	87.14	83.99	84.11	83.69	84.89	83.79	83.79	85.24
5......	84.97	85.09	84.49	87.09	86.84	83.97	84.19	83.74	84.89	83.89	83.79	85.09
6......	84.89	84.97	84.69	86.91	86.54	83.84	84.11	83.79	84.94	83.79	83.74	85.19
7......	84.84	84.84	84.77	86.71	86.39	83.69	84.09	83.79	84.89	83.69	83.84	85.14
8......	84.69	84.79	84.99	86.67	86.19	83.94	84.09	83.79	84.84	83.69	83.89	84.99
9......	84.87	84.74	84.99	87.94	86.17	84.07	83.99	83.94	84.69	83.74	83.79	84.99
10......	84.99	84.69	84.89	87.89	86.09	83.94	84.09	83.91	84.69	83.69	83.89	84.89
11......	84.77	84.59	84.89	87.59	86.07	83.99	84.19	83.89	84.84	83.79	83.89	84.89
12......	84.69	84.39	84.89	87.49	85.99	83.89	84.19	83.89	84.74	83.84	83.79	84.89
13......	84.59	84.14	84.79	87.42	86.09	83.89	84.17	83.94	84.49	83.69	83.69	84.64
14......	84.49	84.01	84.79	87.27	86.09	83.81	84.09	83.99	84.64	83.69	83.79	84.74
15......	84.44	83.99	84.79	87.09	85.94	83.97	83.97	83.89	84.59	83.69	83.99	84.54
16......	84.59	83.91	84.87	87.04	85.84	83.89	83.89	83.89	84.39	83.59	83.69	84.49
17......	84.59	83.79	84.99	86.99	85.79	83.89	83.89	83.84	84.14	83.59	83.74	84.39
18......	84.69	83.79	85.69	86.99	85.54	83.77	83.89	83.79	84.09	83.69	84.09	84.19
19......	84.69	83.87	85.44	87.21	85.34	83.77	83.77	83.79	84.09	83.89	84.34	84.19
20......	84.59	83.89	85.17	87.81	85.19	83.69	83.69	83.79	84.09	83.74	84.19	84.04
21......	84.59	84.04	85.09	89.74	85.01	83.69	83.77	84.01	84.19	83.69	84.14	84.04
22......	84.49	83.99	84.99	89.84	84.84	83.59	83.87	83.99	84.09	83.69	83.94	83.94
23......	84.54	83.91	84.81	89.44	84.69	83.59	83.99	83.99	84.09	83.84	84.04	83.84
24......	84.91	83.89	84.71	88.69	84.69	83.49	83.99	83.89	84.09	83.89	83.94	83.79
25......	85.09	83.81	84.84	87.69	84.84	83.49	83.84	83.89	83.99	83.89	83.89	83.64
26......	85.01	83.71	85.29	87.49	84.69	83.39	83.69	83.89	83.99	84.04	83.84	83.39
27......	84.94	83.69	86.14	87.47	84.57	83.39	83.74	83.99	83.99	83.94	83.79	83.69
28......	84.91	83.69	86.79	87.39	84.49	83.29	83.89	84.11	84.14	83.89	83.79	83.89
29......	84.77	......	87.07	87.59	84.49	83.51	83.89	84.54	83.99	83.89	83.69	83.99
30......	85.14	......	86.94	87.99	84.41	83.54	83.79	84.51	83.84	83.79	83.94	83.99
31......	85.37	......	86.79	......	84.24	......	83.79	84.49	......	83.79	......	83.89

Daily Elevation of Water-surface (B. C. Datum) of Hudson River at Toll Bridge, Schuylerville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	85.05	85.50	84.50	88.90	92.85	84.75	83.75	83.90	85.15	84.00	83.55	84.80
2......	84.95	85.75	84.85	90.45	91.70	84.30	83.95	83.65	84.60	83.85	83.60	84.90
3......	84.95	85.55	85.60	90.55	90.85	84.35	85.30	83.85	84.40	83.95	83.75	84.85
4......	84.65	85.50	85.50	90.15	89.85	84.35	84.85	84.05	84.50	83.90	83.80	85.40
5......	84.45	85.35	85.35	90.05	89.05	84.25	84.90	83.90	84.15	83.85	83.70	85.25
6......	84.80	85.20	85.00	89.35	89.10	84.40	84.40	83.85	83.95	83.90	83.70	84.90
7......	84.90	85.15	85.05	88.60	88.90	84.00	84.20	83.75	84.05	84.00	83.70	85.10
8......	84.90	84.75	84.55	88.75	88.90	84.25	84.20	83.65	84.25	83.90	83.70	84.85
9......	84.95	84.95	85.00	91.90	88.30	84.40	84.30	83.60	84.30	83.90	83.70	85.25
10......	85.10	85.00	85.10	92.00	87.25	84.20	84.20	83.95	84.25	84.05	83.70	84.90
11......	85.05	84.95	84.95	91.55	87.30	84.30	84.15	83.95	84.20	83.70	83.95	84.70
12......	85.15	84.60	84.60	91.05	86.65	84.10	83.90	83.90	83.95	83.60	83.70	84.55
13......	85.00	84.15	84.70	90.65	87.00	84.15	84.15	83.90	83.70	83.90	83.50	84.20
14......	84.85	84.25	84.70	89.95	86.90	83.85	84.30	83.85	83.85	83.85	83.60	84.30
15......	84.55	84.35	84.60	89.50	86.85	84.10	84.45	83.85	84.15	83.80	83.20	83.95
16......	84.55	84.85	84.85	89.60	86.50	84.10	84.40	83.60	84.10	83.95	82.85	83.80
17......	84.45	84.70	85.20	89.60	86.45	84.00	84.25	83.65	83.95	83.90	84.80	83.60
18......	84.15	84.65	85.85	89.80	86.10	83.60	84.10	83.65	83.90	83.65	85.25	83.75
19......	84.70	84.85	85.70	90.65	85.85	83.65	83.75	83.85	83.90	83.55	85.05	83.70
20......	84.80	84.80	85.55	93.60	85.60	84.20	83.90	83.90	83.70	83.90	84.80	83.70
21......	84.65	84.80	85.20	*b*	85.30	83.75	84.10	83.90	83.95	84.00	84.50	83.70
22......	84.80	84.35	84.80	*b*	85.25	83.60	83.85	84.05	84.15	84.05	84.15	83.90
23......	84.85	84.90	84.85	96.20	85.15	83.90	84.00	83.90	84.05	84.10	84.30	83.90
24......	84.80	84.85	85.20	94.25	84.90	83.60	83.80	84.20	83.95	84.25	84.50	84.15
25......	84.70	84.65	85.20	92.45	85.20	83.35	83.85	84.30	84.15	83.80	84.50	84.30
26......	85.10	84.85	85.60	91.65	84.95	83.00	83.65	84.20	84.15	83.95	84.20	84.30
27......	85.10	84.80	86.75	91.75	84.90	83.00	84.00	83.95	83.90	84.10	83.80	84.10
28......	85.20	84.65	88.20	91.70	84.90	82.90	83.95	84.00	84.05	83.90	84.35	83.55
29......	85.25	......	88.45	91.60	84.80	83.45	83.90	84.40	84.00	83.70	84.40	84.00
30......	85.65	......	88.45	92.60	84.75	83.55	83.95	84.30	83.90	83.80	85.10	84.10
31......	85.50	......	88.55	......	*a*	......	83.90	85.25	......	83.80	......	84.00

a No record. *b* Above gage limit.

Daily Elevation of Water-surface (B. C. Datum) of Hudson River at Free Bridge, Liberty Mills

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	85.34	85.29	85.49	89.99	93.79	84.84	84.24	83.99	86.49	84.39	83.74	85.59
2.....	85.29	86.04	85.49	91.64	93.29	84.54	84.44	83.69	85.64	84.04	84.09	85.44
3.....	85.39	86.14	85.69	91.64	93.29	84.39	84.34	84.14	85.34	85.04	84.24	85.44
4.....	85.19	86.14	85.99	91.39	91.54	84.34	84.49	84.19	84.94	84.09	84.84	85.84
5.....	84.94	85.99	85.99	90.99	90.29	84.29	84.39	84.34	84.69	83.94	84.64	85.39
6.....	85.09	85.84	85.59	90.39	90.09	84.29	84.44	84.24	84.54	84.34	84.04	86.34
7.....	85.24	85.59	85.94	89.99	90.09	84.04	84.64	83.94	84.34	84.54	83.64	86.04
8.....	85.39	85.49	85.79	93.29	89.74	84.59	84.79	83.64	84.54	84.49	83.54	85.64
9.....	85.44	85.39	85.59	93.29	89.59	85.09	84.84	83.74	84.59	84.44	83.64	85.19
10.....	85.54	85.34	85.54	92.64	88.74	84.59	84.69	84.49	85.59	84.14	83.54	85.29
11.....	85.39	85.29	85.39	92.09	88.49	84.94	84.64	84.34	84.54	83.99	84.09	85.44
12.....	85.69	85.19	85.29	92.09	87.49	85.44	83.99	84.29	84.14	84.64	84.14	85.34
13.....	85.54	85.29	85.34	91.59	87.74	85.39	84.34	84.19	84.04	84.14	84.59	85.39
14.....	85.14	85.19	85.39	90.89	87.84	84.99	84.29	84.39	84.24	84.24	84.24	85.24
15.....	84.84	85.29	85.29	90.94	87.84	84.89	83.99	84.24	84.54	84.29	83.79	84.94
16.....	84.94	85.29	85.69	90.64	87.49	84.54	84.24	83.69	84.69	84.24	83.59	84.44
17.....	85.14	85.34	86.64	90.49	87.39	84.39	84.39	83.84	84.44	84.29	84.44	84.19
18.....	85.09	85.44	86.84	90.39	87.09	84.64	84.44	84.09	84.44	84.34	85.59	84.09
19.....	85.09	85.74	86.79	92.44	86.49	84.79	83.74	83.54	84.54	84.54	85.74	84.04
20.....	85.24	85.64	86.39	94.99	86.34	84.69	84.29	83.89	83.84	84.54	85.69	83.79
21.....	85.39	85.59	86.09	98.39	86.19	83.99	84.69	84.24	85.04	84.39	85.49	84.09
22.....	85.29	85.49	86.14	99.09	86.04	84.54	84.44	84.54	84.64	84.59	85.29	84.19
23.....	85.34	85.49	86.14	97.24	85.74	84.49	83.84	84.49	84.34	84.44	84.94	84.29
24.....	85.14	85.39	86.29	95.29	85.44	84.34	83.89	84.04	84.49	84.44	84.84	84.19
25.....	84.99	85.24	86.49	93.89	86.44	83.59	84.04	83.64	84.34	84.44	84.69	84.59
26.....	85.09	85.34	86.64	93.49	85.69	84.14	84.09	83.54	84.24	84.79	84.94	85.04
27.....	85.34	85.49	86.59	93.09	85.99	83.39	84.34	83.74	84.34	84.64	84.74	84.69
28.....	85.29	85.39	87.49	92.89	85.54	83.34	84.49	84.24	84.39	84.44	84.74	84.34
29.....	85.34	......	89.04	92.79	85.34	83.44	84.39	84.34	84.39	84.34	84.69	84.59
30.....	85.24	......	89.59	93.79	85.19	84.09	84.39	85.04	84.29	84.34	85.34	84.99
31.....	85.24	......	89.49	......	85.09	......	84.14	85.79	......	83.94	......	84.49

Daily Elevation of Water-surface (B. C. Datum) of Hudson River above Dam at Northumberland

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	103.48	103.58	102.88	105.98	107.13	102.91	104.31	102.66	105.01	102.81	103.41	104.16
2.....	103.63	103.68	102.88	106.58	106.58	102.31	104.51	104.31	104.31	103.06	103.71	103.51
3.....	103.58	103.28	103.98	106.23	106.58	102.71	104.61	103.66	103.86	103.06	102.96	104.16
4.....	103.58	103.63	103.58	105.88	106.28	102.71	104.71	102.86	103.26	103.11	102.76	104.11
5.....	103.28	103.33	103.58	105.98	105.23	101.91	104.31	102.81	102.86	102.91	102.81	103.91
6.....	103.18	103.63	102.93	105.88	104.98	101.76	103.76	102.51	104.21	102.81	102.71	104.41
7.....	102.68	103.53	103.03	105.73	104.88	103.16	103.56	102.61	104.16	102.91	103.06	104.01
8.....	102.78	103.98	102.88	106.18	105.13	102.71	103.36	102.71	103.61	103.16	103.51	103.86
9.....	103.28	103.38	102.73	106.28	104.68	102.86	102.91	103.91	103.71	103.21	103.31	104.16
10.....	103.43	103.58	102.93	106.48	104.88	101.41	103.36	103.41	103.21	103.01	103.21	103.41
11.....	103.68	103.03	102.63	106.53	104.73	102.21	103.26	102.56	102.81	103.86	102.91	103.11
12.....	103.58	102.88	102.28	106.18	103.98	102.01	103.91	102.36	102.81	103.56	103.16	103.01
13.....	103.08	102.38	102.38	106.28	104.03	102.16	103.31	102.71	102.91	102.91	102.86	103.31
14.....	102.58	102.33	102.18	105.68	103.98	102.96	103.11	102.56	102.76	102.91	102.81	103.11
15.....	102.18	103.08	103.48	105.38	103.58	103.61	102.56	102.46	102.61	103.01	103.21	102.81
16.....	102.38	102.78	103.33	105.43	103.33	*a*	102.71	103.46	102.76	102.91	103.06	102.91
17.....	102.18	102.38	102.88	105.63	*a*	*a*	102.96	103.01	102.71	103.16	104.26	102.86
18.....	102.48	102.28	103.78	105.33	*a*	*a*	103.31	102.66	102.31	103.91	104.51	102.81
19.....	102.23	102.53	104.08	106.28	*a*	*a*	104.11	102.61	102.61	103.51	104.61	102.96
20.....	102.03	102.38	103.73	107.58	*a*	*a*	103.76	102.71	104.06	102.81	103.71	103.31
21.....	102.58	102.38	103.73	108.98	*a*	103.01	102.96	102.56	103.81	103.01	103.66	103.06
22.....	102.88	102.58	104.18	108.83	*a*	102.81	102.76	103.56	102.91	102.81	103.71	102.76
23.....	102.63	102.28	103.98	107.83	*a*	101.51	103.01	104.31	103.06	102.91	103.41	102.76
24.....	103.18	102.18	103.23	107.58	*a*	101.21	102.71	103.71	103.31	103.06	102.91	102.86
25.....	102.98	102.18	102.93	107.18	*a*	101.36	102.41	102.81	103.01	104.01	102.91	*a*
26.....	102.63	102.03	103.03	107.18	*a*	102.31	103.91	102.56	103.71	103.71	103.01	102.71
27.....	103.18	102.13	104.08	107.08	*a*	102.26	103.31	102.11	103.41	102.91	103.26	103.31
28.....	103.48	102.28	104.83	106.68	103.01	103.61	102.66	102.61	103.31	103.36	103.91	102.91
29.....	103.68	......	105.63	106.28	102.71	103.11	102.91	104.61	103.16	103.01	104.11	102.61
30.....	104.18	......	106.13	106.88	102.91	102.91	102.76	105.36	102.91	102.71	104.26	102.61
31.....	103.28	......	106.28	......	103.01	......	102.46	105.66	......	103.06	......	102.81

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Hudson River below Dam at Fort Miller

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	103.50	104.25	103.80	107.00	108.85	103.40	103.65	102.85	104.65	102.65	103.10	104.10
2.....	102.95	104.25	103.05	107.80	107.90	102.85	103.85	103.25	103.95	103.15	103.55	103.90
3.....	102.95	103.70	104.05	107.35	107.70	102.85	104.90	103.55	103.50	103.15	103.00	104.45
4.....	103.15	103.95	103.50	106.85	106.65	103.15	104.55	102.80	103.30	103.85	103.35	104.75
5.....	102.05	103.95	103.70	106.90	106.10	102.85	104.50	103.00	103.15	102.85	103.10	105.05
6.....	103.00	103.95	102.95	106.25	106.35	103.20	103.60	103.10	104.55	103.05	103.05	105.05
7.....	102.80	103.75	103.20	105.70	106.00	103.50	103.30	102.75	103.40	103.00	102.85	105.55
8.....	102.85	104.15	103.90	105.75	106.10	103.15	103.10	103.15	103.20	102.95	102.45	105.00
9.....	103.15	103.90	103.45	107.55	105.45	103.40	103.25	103.55	103.60	103.20	103.00	105.05
10.....	102.85	103.70	103.30	107.60	105.25	102.70	103.25	103.05	103.00	103.50	103.05	104.15
11.....	103.55	104.00	102.80	107.50	105.10	103.05	103.20	103.20	103.10	102.75	103.00	103.80
12.....	103.55	103.05	102.40	107.45	104.45	102.95	104.20	102.90	102.90	103.30	102.80	103.90
13.....	103.15	102.25	102.85	107.05	104.80	103.10	103.95	102.95	103.40	103.05	103.00	103.90
14.....	102.80	102.50	102.95	106.65	104.65	104.00	104.15	102.95	103.35	102.90	102.95	103.55
15.....	102.40	103.90	104.60	106.40	104.80	103.25	103.65	103.05	103.60	103.00	103.00	103.00
16.....	102.55	103.70	103.15	106.55	104.45	103.20	103.30	103.90	103.15	103.25	103.20	102.85
17.....	102.40	103.15	102.80	106.50	104.80	103.05	103.35	103.15	102.85	103.10	104.60	102.35
18.....	103.30	103.15	103.85	106.85	104.10	102.85	103.15	102.95	102.95	103.10	105.10	102.15
19.....	103.70	103.20	103.65	107.70	104.20	103.20	104.15	103.25	103.25	103.25	104.70	102.40
20.....	102.95	103.10	103.85	109.80	103.70	103.20	103.70	102.95	103.70	103.00	103.65	103.15
21.....	102.80	103.35	103.20	112.40	103.65	104.10	103.25	103.35	103.20	103.25	103.60	103.80
22.....	102.95	103.30	104.45	112.20	103.90	103.60	103.25	103.65	103.60	103.25	104.40	102.95
23.....	102.95	103.85	103.10	111.15	103.50	102.90	102.85	104.25	103.35	103.50	104.35	103.30
24.....	103.05	103.00	103.40	109.85	103.60	102.80	102.90	103.80	103.00	103.35	103.40	103.00
25.....	103.65	103.00	103.35	108.45	103.90	103.00	102.85	103.40	103.05	103.65	103.45	103.70
26.....	103.80	103.05	103.05	108.30	103.30	103.25	104.00	103.35	104.00	103.35	103.40	104.00
27.....	102.85	102.85	104.60	108.10	103.40	103.70	103.70	102.75	104.05	103.35	102.55	103.30
28.....	103.20	102.85	105.60	108.10	103.30	104.15	103.20	103.40	103.05	103.90	103.50	101.95
29.....	103.10	......	106.40	108.00	103.50	103.50	102.75	103.90	103.35	102.85	104.55	102.95
30.....	103.45	......	106.55	108.80	103.05	103.05	102.80	104.75	102.80	103.15	104.70	102.75
31.....	103.45	......	106.80	......	103.35	......	102.75	105.20	......	103.00	......	102.90

NOTE.— Gage below Barge canal lock No. 6 since April, 1911.

Daily Elevation of Water-surface (B. C. Datum) of Hudson River above Dam at Fort Miller

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec
1.....	115.14	115.79	115.19	117.24	118.59	115.39	114.84	114.69	115.99	114.44	114.99	115.44
2.....	114.89	115.49	114.49	117.69	118.19	115.14	115.09	115.19	115.59	114.64	114.64	115.19
3.....	115.04	115.24	115.44	117.69	118.14	115.04	115.64	114.64	115.44	114.84	114.69	115.59
4.....	114.79	115.14	114.94	117.59	117.54	115.14	115.29	114.59	115.54	115.19	114.59	115.99
5.....	114.19	115.24	115.24	117.69	117.29	115.09	115.19	114.64	115.54	114.64	114.24	116.04
6.....	114.84	115.29	114.84	117.34	117.44	114.99	114.59	114.69	115.74	114.59	114.54	116.24
7.....	114.89	115.04	114.84	117.09	117.24	115.59	114.79	114.44	114.89	114.59	114.49	115.99
8.....	114.79	115.34	115.39	117.09	117.29	114.89	115.04	114.44	115.14	114.59	115.24	116.04
9.....	115.04	115.24	114.84	117.99	116.99	114.84	114.89	114.94	115.24	114.64	114.64	115.39
10.....	114.79	115.09	115.04	118.09	116.79	114.89	114.99	114.19	115.54	114.64	114.69	115.34
11.....	115.74	114.99	114.64	118.04	116.74	114.79	114.89	114.89	115.09	115.19	114.49	115.09
12.....	114.99	114.39	114.74	117.99	116.34	114.79	114.99	114.79	114.89	114.54	114.49	115.04
13.....	114.84	114.89	114.69	117.74	116.54	114.64	114.99	114.79	115.14	114.54	114.29	115.29
14.....	114.64	114.74	114.84	117.59	116.49	115.09	115.29	114.79	115.54	114.59	114.29	114.74
15.....	114.59	115.39	115.49	117.49	116.64	114.49	114.99	114.79	115.04	114.54	114.99	114.84
16.....	114.69	115.29	114.99	117.64	116.29	114.79	114.69	115.04	114.79	114.79	114.59	114.79
17.....	114.54	114.79	114.79	117.54	116.49	114.49	114.94	114.94	114.54	114.49	115.34	114.44
18.....	115.09	114.84	115.19	117.69	116.04	113.89	114.94	115.24	114.64	115.14	115.89	114.19
19.....	115.29	114.74	115.24	118.14	116.09	114.84	115.14	115.09	114.54	114.49	115.69	114.49
20.....	114.64	114.94	115.24	119.19	115.79	114.89	114.84	115.34	114.29	114.49	115.19	114.89
21.....	114.64	114.84	115.04	120.54	115.64	115.29	114.89	115.24	114.74	114.79	115.04	114.84
22.....	114.64	115.29	115.49	120.34	115.89	114.74	114.69	115.44	114.94	114.89	115.29	114.89
23.....	114.54	115.04	115.04	119.74	115.39	114.59	114.49	115.39	114.59	115.09	115.14	114.99
24.....	114.69	114.64	115.04	119.14	115.69	114.29	114.49	115.14	114.64	114.89	115.04	115.14
25.....	115.14	114.94	115.14	118.49	115.79	114.24	114.79	115.34	114.79	115.19	115.14	115.19
26.....	114.94	114.79	114.94	118.44	115.44	114.54	115.14	115.34	114.59	114.74	115.04	115.44
27.....	114.44	114.94	115.59	118.29	115.39	114.39	114.69	115.24	115.19	114.94	114.49	115.49
28.....	114.99	114.89	116.29	118.34	115.39	114.89	114.74	115.39	114.79	114.39	115.19	114.59
29.....	114.84	......	116.84	118.34	115.54	114.09	114.44	115.44	114.64	114.39	115.69	114.59
30.....	115.14	......	116.89	118.59	115.19	114.44	114.59	116.09	114.44	114.49	115.49	114.89
31.....	115.04	......	117.04	......	115.49	......	114.69	116.24	......	114.34	......	114.39

Daily Elevation of Water-surface (B. C. Datum) of Hudson River at Crocker's Reef Dam, near Moseskil

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	119.91	119.66	119.76	122.01	123.81	120.31	119.61	119.66	120.31	119.61	119.46	120.31
2.....	119.81	120.16	119.81	122.46	123.16	119.81	119.71	119.61	120.16	119.66	119.61	119.96
3.....	119.76	119.96	120.16	122.51	122.91	119.86	120.11	119.61	119.86	119.76	119.71	120.31
4.....	119.76	120.06	119.81	122.46	122.26	119.91	119.96	119.71	119.81	119.66	119.66	120.76
5.....	119.81	119.96	119.96	122.36	122.11	119.81	119.81	119.66	119.81	119.56	119.71	120.61
6.....	119.81	120.06	119.91	122.06	122.21	119.76	119.76	119.56	119.61	119.71	119.61	120.36
7.....	119.81	119.86	119.91	121.76	122.06	119.71	119.76	119.61	119.51	119.76	119.61	120.46
8.....	119.81	119.61	119.66	121.81	122.06	119.96	119.91	119.56	119.71	119.76	119.46	120.11
9.....	119.81	119.96	119.91	122.86	121.76	119.76	119.76	119.61	119.91	119.76	119.61	120.21
10.....	119.76	120.01	120.01	122.86	121.46	119.81	119.86	119.66	119.76	119.66	119.71	120.01
11.....	119.71	119.96	119.81	122.86	121.46	119.71	119.81	119.76	119.76	119.46	119.56	119.91
12.....	119.81	119.71	119.81	122.76	121.21	119.71	119.66	119.66	119.66	119.71	119.61	119.86
13.....	119.71	119.76	119.76	122.56	121.31	119.81	119.81	119.66	119.66	119.71	119.66	119.66
14.....	119.81	119.91	119.86	122.31	121.21	119.86	120.06	119.66	119.66	119.66	119.51	119.71
15.....	119.71	119.61	119.81	122.26	121.36	119.46	119.86	119.56	119.91	119.61	119.51	119.66
16.....	119.76	119.91	119.81	122.36	121.06	119.81	119.71	119.46	119.81	119.76	119.66	119.66
17.....	119.71	119.81	119.86	122.31	120.91	119.76	119.81	119.61	119.81	119.76	120.06	119.56
18.....	119.56	119.91	120.01	122.46	120.81	119.71	119.86	119.66	119.66	119.56	120.56	119.56
19.....	119.91	119.91	120.06	122.91	120.91	119.76	119.66	119.66	119.66	119.56	120.41	119.46
20.....	119.81	119.91	120.11	124.36	120.66	119.76	119.66	119.61	119.56	119.66	120.06	119.41
21.....	119.76	119.96	119.91	126.66	120.41	119.86	119.76	119.71	119.66	119.66	119.86	119.71
22.....	119.71	119.66	119.71	126.56	120.66	119.71	119.86	119.66	119.76	119.71	119.81	119.66
23.....	119.76	120.01	120.01	125.36	120.26	119.81	119.71	119.56	119.66	119.76	120.11	119.76
24.....	119.81	119.91	120.01	124.16	120.21	119.66	119.76	119.66	119.71	119.76	119.86	119.66
25.....	119.46	120.01	120.01	123.41	120.56	119.66	119.76	119.66	119.81	119.56	119.91	119.56
26.....	119.81	119.91	119.96	123.26	120.36	119.61	119.66	119.61	119.66	119.66	119.86	119.86
27.....	119.66	119.96	120.36	123.31	120.11	119.66	119.71	119.61	119.66	119.71	119.66	119.51
28.....	119.86	119.81	121.01	123.26	120.26	119.56	119.66	119.81	119.61	119.61	119.96	119.56
29.....	119.86	......	121.41	123.26	120.26	119.51	119.61	119.96	119.66	119.66	119.96	119.71
30.....	119.86	......	121.71	123.71	120.41	119.51	119.56	119.86	119.76	119.66	120.31	119.91
31.....	119.96	......	121.81	......	119.81	......	119.61	120.46	......	119.66	......	119.56

Daily Elevation of Water-surface (B. C. Datum) of Hudson River at Bridge St., Fort Edward

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	119.87	119.57	119.77	123.77	127.27	119.87	120.37	119.57	120.67	119.67	119.67	120.07
2.....	119.87	119.67	119.97	124.37	127.42	120.17	120.87	119.57	120.37	119.67	119.67	120.27
3.....	119.87	119.67	120.32	124.67	126.27	120.37	120.87	119.87	120.37	119.67	119.67	120.57
4.....	119.87	119.87	120.77	124.62	125.77	120.32	120.67	119.97	120.17	119.97	119.57	121.17
5.....	120.17	119.87	120.87	124.57	124.62	120.27	120.42	120.07	120.27	119.97	119.67	120.97
6.....	120.27	119.77	120.77	123.87	123.57	120.17	120.37	120.17	120.17	119.77	119.67	120.27
7.....	120.32	119.57	120.77	123.22	124.47	119.87	120.17	120.27	120.27	119.67	119.67	120.37
8.....	120.07	119.37	120.77	123.17	124.37	119.97	120.07	120.17	120.27	119.67	119.27	120.27
9.....	119.97	119.77	120.57	125.77	124.07	120.07	119.87	*a*	120.27	119.67	119.37	120.17
10.....	119.87	119.87	120.37	125.67	123.22	119.87	119.77	*a*	120.07	119.67	119.57	119.87
11.....	119.77	119.87	120.37	125.62	122.87	119.87	119.67	*a*	119.87	119.57	119.67	119.97
12.....	119.67	119.87	120.17	125.42	122.62	119.87	119.57	*a*	119.57	119.67	119.67	120.37
13.....	119.97	119.77	120.07	125.07	121.87	119.67	119.77	*a*	119.17	119.67	119.67	119.67
14.....	120.27	119.57	119.87	124.77	121.87	119.47	119.87	*a*	119.67	119.67	119.67	119.67
15.....	120.27	119.57	119.87	124.37	122.17	119.47	119.87	*a*	120.17	119.67	119.67	119.87
16.....	120.47	119.57	120.07	124.27	121.77	119.67	119.87	119.42	119.87	119.67	119.77	120.07
17.....	120.37	119.67	119.97	124.37	121.37	119.67	119.67	119.67	119.87	119.67	120.17	119.57
18.....	120.37	119.67	119.87	125.07	120.97	119.67	119.42	119.87	119.97	119.67	120.37	119.47
19.....	120.07	119.87	119.67	126.07	120.87	119.47	119.42	119.97	119.97	119.67	120.47	119.47
20.....	119.87	119.87	119.87	128.97	120.77	119.47	119.77	119.97	119.97	119.67	120.37	119.27
21.....	119.87	119.67	119.87	131.87	120.37	119.42	119.87	119.87	119.87	119.67	120.37	119.27
22.....	119.87	119.57	120.07	131.67	120.27	119.47	120.07	119.87	119.87	120.07	119.87	119.47
23.....	119.87	119.57	120.67	129.77	120.07	119.67	119.87	119.77	120.07	119.87	120.07	119.87
24.....	119.87	119.87	120.67	127.82	120.37	119.67	119.67	119.87	119.87	119.67	120.27	119.87
25.....	119.87	119.87	120.37	126.57	120.87	119.67	119.57	119.87	119.77	119.67	120.27	120.07
26.....	119.77	119.87	120.52	126.77	120.67	119.67	119.42	119.97	119.97	119.67	120.07	119.87
27.....	119.67	119.57	120.97	126.57	120.57	119.57	119.87	120.07	119.87	119.67	119.97	119.47
28.....	119.77	119.37	121.97	126.52	120.47	119.67	119.87	119.87	119.57	119.67	120.27	119.67
29.....	119.87	......	122.77	126.42	120.27	119.87	119.77	119.67	119.77	119.67	119.87	119.67
30.....	119.87	......	123.17	126.47	120.12	119.87	119.67	119.87	119.87	119.67	120.67	119.67
31.....	119.87	......	123.52	......	119.87	......	119.67	119.97	......	119.67	......	119.67

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Hudson River above Feeder Dam at Glens Falls

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	281.68	281.83	281.33	283.93	286.18	281.18	281.13	281.53	281.33	281.68	282.68	283.28
2.....	281.78	282.13	281.78	284.23	285.43	281.18	281.83	281.28	281.28	281.53	282.53	283.23
3.....	281.63	281.93	281.93	284.53	285.18	280.83	281.28	281.58	281.33	281.38	282.53	283.68
4.....	281.18	281.98	281.73	284.73	284.33	280.58	280.73	281.28	281.38	281.88	282.63	284.23
5.....	281.63	281.98	281.68	284.73	283.73	280.93	280.78	281.58	281.08	281.78	282.53	283.88
6.....	281.73	282.08	281.78	284.23	283.98	280.63	281.23	281.68	281.53	281.38	282.53	283.63
7.....	281.68	281.73	281.68	284.03	283.63	280.58	281.18	281.68	280.98	281.28	282.48	283.38
8.....	281.58	281.88	281.53	283.88	283.58	280.98	281.23	281.68	281.53	281.28	282.23	283.28
9.....	281.83	282.08	281.83	285.13	283.18	280.38	281.33	281.48	281.38	281.38	282.58	283.23
10.....	281.73	281.93	281.73	285.33	282.88	280.58	281.33	281.68	281.68	281.18	282.53	283.33
11.....	281.53	281.98	281.53	285.28	282.88	280.58	281.23	281.58	280.88	281.03	282.48	282.88
12.....	281.88	281.68	281.63	285.18	282.43	280.83	281.33	281.58	281.18	281.23	282.43	282.73
13.....	281.83	281.48	281.68	284.93	282.83	280.93	281.13	281.68	281.23	281.38	282.48	282.78
14.....	281.58	281.58	281.63	284.73	283.08	280.58	281.38	281.63	281.88	281.88	282.33	282.68
15.....	281.53	281.48	281.58	284.58	283.03	281.08	281.33	281.63	281.63	281.98	282.43	282.73
16.....	281.48	281.68	281.63	284.73	282.93	281.38	281.28	281.18	281.33	281.68	282.98	282.63
17.....	281.43	281.53	281.58	284.58	282.83	281.38	281.23	281.53	281.58	281.38	283.58	282.58
18.....	281.48	281.63	281.83	284.93	282.48	281.43	281.08	281.63	281.48	281.83	283.98	282.58
19.....	281.58	281.68	281.98	285.58	282.68	281.38	281.43	281.63	281.58	282.53	283.48	282.53
20.....	281.53	281.68	281.93	287.23	282.48	281.13	281.48	281.68	282.08	282.43	283.13	282.28
21.....	281.73	281.53	281.68	288.78	282.08	281.33	281.53	281.78	281.93	282.68	282.93	282.93
22.....	281.68	281.48	281.43	288.48	282.38	281.43	281.43	281.68	281.58	282.63	282.98	282.63
23.....	281.48	281.73	281.98	287.63	281.93	280.83	281.23	281.28	281.58	282.48	283.18	282.88
24.....	281.63	281.68	281.93	286.63	281.93	281.38	281.38	281.58	281.68	282.28	282.93	282.83
25.....	281.63	281.73	281.83	285.88	282.03	281.13	281.48	281.68	281.43	282.63	282.88	282.68
26.....	281.78	281.68	281.63	285.63	281.88	280.83	281.38	281.78	281.43	282.28	282.48	282.53
27.....	281.68	281.58	281.93	285.53	281.83	281.13	281.78	281.58	281.03	281.98	282.78	282.48
28.....	281.88	281.63	282.88	285.48	281.38	281.03	281.48	281.38	281.63	282.58	283.28	282.68
29.....	281.78	......	283.13	285.33	281.58	281.08	281.43	281.43	281.48	282.53	283.33	282.63
30.....	281.73	......	283.48	285.98	280.98	281.18	281.63	281.38	281.53	282.53	283.43	282.53
31.....	281.73	......	283.58	......	280.58	......	281.53	281.43	......	282.38	......	282.63

Daily Elevation of Water-surface (B. C. Datum) of Hudson River at Varney Farm, above Glens Fall

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	*a*	*a*	281.85	285.45	289.60	281.35	281.30	281.30	281.35	281.15	282.45	282.75
2......	*a*	*a*	282.20	286.30	287.75	281.10	281.75	281.20	281.30	281.15	282.10	282.45
3......	*a*	281.65	281.85	286.45	287.60	281.35	281.80	281.45	281.35	280.90	282.05	283.30
4......	*a*	281.80	282.00	286.20	286.10	280.80	280.70	280.80	281.25	281.20	282.15	284.25
5......	*a*	281.95	281.95	286.50	285.20	280.60	280.65	281.25	281.00	281.30	281.80	284.15
6......	*a*	281.85	281.85	285.00	285.95	281.65	280.65	281.35	281.30	281.40	282.15	284.05
7......	*a*	281.45	281.75	285.00	285.20	281.30	281.50	281.35	280.55	281.00	282.10	283.85
8......	*a*	281.50	281.40	285.05	285.35	281.75	281.70	281.40	281.20	281.15	281.85	283.70
9......	*a*	282.30	281.70	287.10	284.35	281.75	281.45	281.30	281.15	281.05	281.95	283.35
10......	*a*	281.90	281.70	287.60	284.10	281.00	281.30	281.25	281.75	281.05	281.95	282.60
11......	*a*	282.05	281.55	287.65	283.90	280.45	281.90	281.30	280.85	280.75	281.95	282.80
12......	*a*	281.70	281.55	287.15	283.20	280.75	281.80	281.30	280.75	280.90	282.05	283.10
13......	*a*	281.45	281.70	286.90	283.85	280.80	281.00	281.45	280.90	280.90	282.05	282.95
14......	*a*	281.40	281.60	286.50	283.70	281.50	281.20	281.50	281.60	280.90	282.25	282.85
15......	*a*	281.40	281.55	286.70	283.65	281.40	281.30	281.40	281.25	281.40	282.40	282.80
16......	*a*	281.70	281.70	286.60	283.50	281.60	281.35	281.25	281.05	281.50	282.75	282.65
17......	*a*	281.65	281.60	286.20	283.10	281.80	281.25	281.20	281.00	281.25	283.65	283.05
18......	*a*	281.90	281.55	287.20	283.30	281.95	281.30	281.45	280.90	282.00	283.95	283.20
19......	*a*	281.90	281.75	287.70	282.80	281.60	281.30	281.50	281.50	282.40	283.55	283.30
20......	*a*	281.95	281.70	290.90	282.65	281.80	281.45	281.45	281.90	282.20	283.30	282.95
21......	*a*	281.70	281.80	291.30	282.75	282.30	281.40	281.40	281.70	282.45	282.95	282.80
22......	*a*	281.75	281.65	*a*	282.40	281.70	281.15	281.50	281.35	282.20	282.50	282.70
23......	*a*	281.70	281.95	290.00	282.05	280.60	281.15	280.75	281.10	282.45	282.35	282.80
24......	*a*	281.55	281.70	289.85	282.55	280.80	281.30	281.50	281.35	282.20	282.35	282.80
25......	*a*	281.50	281.20	288.25	282.10	281.30	281.25	281.35	280.70	282.30	282.50	282.75
26......	*a*	281.55	282.20	288.50	282.25	281.20	281.20	281.55	280.90	281.80	282.60	282.70
27......	281.75	281.65	282.15	288.30	281.95	281.60	281.25	281.40	280.85	282.50	282.50	282.65
28......	281.80	281.40	283.40	288.15	281.65	281.20	281.35	281.40	281.55	282.25	283.30	282.70
29......	281.55	......	284.40	288.30	281.25	281.50	281.40	281.20	281.05	281.90	283.30	282.55
30......	281.65	......	284.90	289.70	281.30	281.50	281.35	281.15	281.10	282.15	283.30	282.65
31......	281.70	......	285.05	......	281.35	......	281.25	281.55	......	282.30	......	282.55

a No record. Station established, January 27, 1914.

Daily Gage Height, in Feet, of Hudson River at Corinth

1913	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	1.25	1.95	0.70	6.15	1.80	4.95	1.60	1.70	0.65	1.10	2.55	2.95
2......	1.05	1.75	0.60	5.90	1.70	4.55	1.60	1.60	0.40	1.30	2.20	2.80
3......	1.45	1.55	0.45	5.35	1.60	4.00	1.30	1.60	0.30	1.55	2.20	2.75
4......	2.65	1.30	0.55	5.05	1.45	3.50	1.30	1.70	0.30	1.60	2.30	2.55
5......	2.70	1.30	0.60	5.50	1.30	3.15	1.30	1.60	0.45	1.65	2.30	2.35
6......	2.70	1.05	0.60	5.25	1.25	2.95	1.20	1.70	0.40	1.55	2.20	2.75
7......	2.65	0.80	0.50	4.85	1.00	2.75	1.20	1.70	0.50	1.55	2.15	3.00
8......	2.95	0.55	0.50	4.30	1.55	2.15	1.00	1.60	0.45	1.45	2.05	2.85
9......	3.40	0.50	0.60	4.00	1.50	1.85	1.20	1.30	0.40	1.45	2.55	2.85
10......	3.25	0.40	0.80	3.10	1.10	2.00	1.00	1.30	0.50	1.55	4.40	3.05
11......	2.95	0.40	1.25	2.85	0.75	2.00	1.00	1.30	0.50	1.60	4.70	3.15
12......	2.70	0.30	1.15	3.00	0.60	1.80	1.00	1.30	0.45	1.75	4.25	2.95
13......	2.95	0.30	1.20	3.00	0.65	1.80	1.65	1.60	0.40	1.75	3.65	2.80
14......	2.75	0.20	2.30	3.05	0.80	1.85	2.00	1.60	0.55	1.60	3.55	2.75
15......	2.50	0.20	3.40	3.10	0.90	2.00	2.00	1.50	0.55	1.55	3.40	2.70
16......	2.30	0.20	3.90	2.85	1.55	1.95	2.00	1.40	0.55	1.35	3.20	2.60
17......	2.65	0.30	3.85	2.95	1.70	1.65	1.90	1.50	0.75	1.15	2.90	2.45
18......	2.70	0.30	3.65	2.65	1.20	1.55	1.60	1.60	0.90	1.00	2.30	2.25
19......	3.25	0.40	3.45	2.45	1.30	1.80	1.60	1.70	0.90	1.15	2.00	2.10
20......	3.55	0.40	3.60	2.25	2.00	1.75	1.60	1.50	0.90	1.80	2.25	2.05
21......	3.95	0.50	4.35	2.10	2.10	1.70	1.60	1.40	1.00	2.55	3.00	2.15
22......	4.30	0.50	5.30	2.10	2.40	1.65	1.80	1.20	1.25	2.30	3.20	1.95
23......	4.00	0.60	5.50	2.15	3.45	1.50	1.80	1.20	1.20	2.00	2.05	1.80
24......	3.80	0.70	5.00	1.95	4.05	1.45	2.00	1.30	1.20	2.15	3.00	1.85
25......	3.50	0.60	5.40	1.70	4.10	1.55	1.80	1.40	1.15	2.50	2.95	1.95
26......	3.25	0.65	8.65	1.45	3.95	1.65	1.50	1.20	1.10	2.85	2.85	1.90
27......	2.95	0.60	11.50	1.55	3.75	1.75	1.20	1.10	1.00	3.05	2.65	1.80
28......	2.70	0.70	12.15	1.70	3.95	1.65	1.60	1.00	1.10	3.15	2.50	1.80
29......	2.30	......	11.05	2.00	5.10	1.60	1.80	1.00	1.15	3.20	2.75	1.80
30......	2.00	......	7.85	1.85	5.50	1.55	1.80	0.90	1.10	2.80	3.10	1.60
31......	1.95	......	6.45	......	5.30	......	1.70	0.80	......	2.55	......	1.60

Daily Gage Height, in Feet, of Hudson River at Corinth

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	1.55	2.00	1.25	4.55	6.70	2.35	2.05	1.80	2.75	1.80	1.40	3.15
2.....	1.40	2.00	1.35	5.05	6.30	2.15	3.30	1.90	2.45	1.80	1.35	3.25
3.....	1.40	2.05	1.45	4.85	5.90	1.85	2.70	1.95	2.25	1.80	1.30	3.30
4.....	1.40	2.10	1.50	5.05	5.20	1.85	2.50	1.85	2.05	1.90	1.35	3.40
5.....	1.50	2.00	1.50	5.05	4.80	2.15	2.45	1.70	1.95	1.90	1.40	3.30
6.....	1.50	1.90	1.40	4.80	4.75	2.25	2.30	1.70	1.75	1.90	1.30	3.15
7.....	1.45	1.80	1.40	4.15	4.55	2.15	2.75	1.80	1.95	1.90	1.40	2.95
8.....	1.40	1.85	1.40	4.45	4.35	2.10	2.60	1.85	2.15	1.80	1.45	2.85
9.....	1.40	1.90	1.40	5.60	4.05	2.05	2.50	1.90	2.20	1.70	1.50	2.65
10.....	1.55	1.80	1.30	5.65	3.70	1.95	2.25	1.90	2.10	1.70	1.55	2.45
11.....	1.70	1.80	1.30	5.60	3.45	1.90	1.70	1.95	2.05	1.80	1.50	2.35
12.....	1.75	1.70	1.30	5.45	3.15	1.75	1.95	1.90	2.00	1.90	1.45	2.45
13.....	1.70	1.70	1.25	5.30	3.05	1.65	2.05	1.85	1.95	1.85	1.45	2.60
14.....	1.60	1.75	1.20	5.00	3.05	1.60	1.95	1.80	1.90	1.80	1.55	2.45
15.....	1.60	1.80	1.25	5.00	2.90	1.70	1.85	1.80	1.80	1.75	1.65	2.25
16.....	1.60	1.70	1.75	4.90	2.55	1.85	1.70	1.80	1.80	1.70	2.40	2.10
17.....	1.70	1.70	2.30	4.95	2.25	1.90	1.70	1.80	1.80	1.70	2.90	1.95
18.....	1.65	1.60	2.45	5.35	2.10	1.95	1.70	1.90	1.90	1.80	3.30	1.85
19.....	1.60	1.60	2.40	6.65	2.05	1.80	1.95	1.90	1.90	1.90	3.20	1.85
20.....	1.55	1.50	2.35	9.00	2.00	1.75	1.95	2.00	2.00	2.00	3.10	1.95
21.....	1.50	1.50	2.50	10.65	2.00	1.75	1.90	2.15	2.05	1.90	3.05	1.95
22.....	1.45	1.50	2.60	10.10	2.05	1.85	1.80	2.20	2.00	1.90	3.15	1.90
23.....	1.50	1.45	2.50	8.60	2.15	1.85	1.85	2.20	1.95	2.00	3.05	1.75
24.....	1.50	1.40	2.55	7.35	2.40	1.75	1.95	2.10	2.00	1.95	2.85	1.70
25.....	1.50	1.35	2.35	6.55	2.70	1.70	1.90	1.85	1.95	1.90	2.65	1.60
26.....	1.55	1.30	2.20	6.30	2.60	1.65	2.00	1.70	1.90	1.85	2.45	1.50
27.....	1.60	1.30	2.60	6.05	2.70	1.60	2.00	1.70	1.85	1.75	2.65	1.50
28.....	1.65	1.30	3.55	6.00	2.75	1.50	2.05	1.90	1.95	1.70	2.85	1.60
29.....	1.70	......	4.95	6.15	2.75	1.65	2.00	2.15	1.90	1.60	3.15	1.70
30.....	1.80	......	3.75	6.80	2.55	1.70	2.05	3.15	1.90	1.50	3.25	1.80
31.....	1.90	......	3.95	......	2.50	......	1.90	2.95	......	1.50	......	1.75

DISCHARGE RECORDS, UPPER HUDSON RIVER AND TRIBUTARIES

In the following pages will be found tables giving the daily discharge and monthly run-off of the upper Hudson river and its tributaries at a considerable number of locations. These records are derived from various sources, which are indicated for records other than those maintained by this Department.

As to records of the Hudson river and tributaries it can only be said at this time that they are probably more consistent than would appear from a direct comparison. In some cases where the recorded run-off per square mile at adjacent stations differs, it does not necessarily follow that either one of the records is incorrect. There are wide variations in the hydrological conditions in different portions of the upper Hudson drainage basin. For example, the topography, culture, geology and soil for the Hudson and its tributaries above North Creek are all essentially different from the corresponding features of the drainage basin of

Saratoga lake outlet. The hydrological features of both the above mentioned basins are essentially different from the corresponding features of the drainage basins of the Batten kill and Hoosic streams. The conditions are somewhat further complicated by diversion from the Hudson river to supply the Champlain canal through Glens Falls feeder and at Northumberland dam.

HUDSON RIVER

HUDSON RIVER AT DAM OF ADIRONDACK ELECTRIC POWER CORPORATION (LOWER DAM), MECHANICVILLE

This gage was established August 18, 1905, by this Department. The gage is a vertical staff divided to feet and tenths and reading from zero to 16 feet. It is attached to the upstream face of the river wall at the right-hand end of the line of waste-gates forming a continuation of the dam. Readings are taken at 8 A. M. and 5 P. M. by E. H. Stickney. The gage zero is at elevation 43.00. A record is kept in the adjoining power-plant, showing the use of water by the turbine wheels and also the waste over the dam, through gates, etc.

The accompanying tables show the discharge as calculated at the power-plant.

The record of the flow of Hudson river at this plant was begun October 1, 1897.

Acknowledgment is made to the Adirondack Electric Power Corporation for this record.

For table of elevations of water-surface above dam, see page 209.

Daily Discharge, in Second-feet, of Hudson River at Dam of Adirondack Electric Power Corporation (Lower Dam), Mechanicville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1...	3,523	*6,904	*2,182	26,849	35,801	6,491	2,303	1,607	5,488	1,754	*786	4,285
2...	3,506	6,526	3,097	35,338	31,542	3,964	4,779	*1,732	4,081	1,465	1,454	4,059
3...	2,853	5,826	8,581	31,180	*28,085	4,032	6,130	2,107	3,064	1,399	1,702	5,180
4...	*1,858	6,529	5,935	28,042	24,210	4,309	2,718	1,735	2,525	1,497	1,182	7,393
5...	2,082	6,569	5,267	*26,708	23,660	3,551	*2,402	1,456	3,302	*1,519	1,199	6,674
6...	3,406	6,273	4,394	22,936	24,267	3,182	2,589	1,411	*2,418	1,565	1,925	*4,953
7...	3,241	5,115	3,934	21,004	22,548	*2,608	3,259	1,505	2,501	2,297	1,290	5,457
8...	3,714	*3,341	*3,237	28,321	21,305	3,854	3,367	1,453	2,302	1,602	*1,019	4,943
9...	3,915	4,809	4,282	41,132	17,819	3,887	3,068	*999	3,091	1,152	1,381	5,256
10...	2,576	5,814	3,947	35,689	*16,069	3,214	3,079	1,684	2,232	1,202	1,599	4,194
11...	*3,253	4,722	3,852	32,487	15,936	3,341	3,246	1,894	2,243	*1,182	1,846	3,346
12...	3,927	3,658	3,477	*30,989	13,470	2,891	*2,408	1,853	1,279	1,246	1,662	3,131
13...	3,592	2,506	3,563	29,197	16,478	2,560	3,161	1,633	*1,522	1,574	1,427	*2,058
14...	3,261	2,465	2,780	26,754	15,363	*1,971	3,840	1,608	1,741	1,498	1,644	2,398
15...	2,698	*2,115	*2,785	26,030	15,100	3,532	4,068	1,597	2,368	1,234	*2,158	2,078
16...	2,638	2,922	4,116	26,412	12,765	3,447	3,404	*1,181	2,122	1,944	1,846	2,508
17...	1,919	2,540	10,087	25,062	*12,592	3,209	3,620	1,602	1,791	1,644	3,757	2,018
18...	*1,231	2,366	9,979	25,156	11,687	1,632	2,317	1,457	1,677	*1,198	6,673	1,615
19...	2,941	3,306	8,395	*31,348	11,469	2,318	*1,686	1,947	1,544	1,413	5,519	2,070
20...	2,799	2,834	6,414	48,394	9,519	2,942	2,176	1,923	*1,241	1,896	3,497	*1,489
21...	3,190	2,766	5,076	58,655	8,424	*1,674	2,612	1,579	2,071	1,991	3,088	1,604
22...	3,011	*2,004	*4,679	55,319	9,116	3,315	2,167	2,352	2,262	1,862	*2,988	2,507
23...	3,190	2,680	5,406	47,094	6,562	2,908	2,007	*1,904	2,159	1,977	4,191	2,284
24...	2,552	2,681	5,609	39,843	*5,474	2,381	1,322	3,151	1,971	1,782	3,093	1,649
25...	*2,640	2,086	6,089	33,433	8,253	1,928	1,664	2,335	1,943	*892	2,340	1,597
26...	5,012	2,177	14,709	*33,326	6,440	2,053	*1,645	2,380	1,866	1,420	2,329	2,444
27...	4,085	2,384	20,967	33,080	6,065	1,267	2,076	1,790	*1,109	2,312	2,037	*1,423
28...	4,557	2,753	28,223	32,775	7,007	*1,430	2,046	2,676	2,413	1,494	3,194	1,049
29...	4,987	......	*24,195	33,645	6,842	2,270	1,707	2,819	2,546	2,292	*3,381	2,281
30...	6,633	......	23,989	35,945	5,631	2,013	1,636	*3,341	1,631	1,618	5,246	2,034
31...	7,394	......	24,167	....	*4,210	......	1,818	6,953	......	1,475	......	1,706
Mean	3,425	3,810	8,497	33,405	14,636	2,939	2,720	2,054	2,283	1,593	2,515	3,087

* Sunday.

Monthly Discharge, in Second-feet, of Hudson River at Dam of Adirondack Electric Power Corporation (Lower Dam), Mechanicville

[Drainage area, 4,570 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	7,394	1,231	3,425	0.749	0.864
February	6,904	2,004	3,810	0.834	0.868
March	28,223	2,182	8,497	1.86	2.144
April	58,655	21,004	33,405	7.31	8.156
May	35,801	4,210	14,636	3.20	3.689
June	6,491	1,267	2,939	0.643	0.717
July	6,130	1,322	2,720	0.595	0.686
August	6,953	999	2,054	0.449	0.519
September	5,488	1,109	2,283	0.50	0.558
October	2,312	892	1,593	0.349	0.402
November	6,673	786	2,515	0.55	0.614
December	7,393	1,049	3,087	0.675	0.778
The year	58,655	786	6,732	1.473	19.995

HUDSON RIVER AT WEST VIRGINIA PULP AND PAPER CO.'S MILL (UPPER DAM), MECHANICVILLE

Location.—At the upper dam, the Duncan dam of the West Virginia Pulp & Paper Co., in the village of Mechanicville, about 3,700 feet above the mouth of Anthony kill (coming in from the right), 1¼ miles below the mouth of Hoosic river (coming in from the left), and about 19 miles above the mouth of Mohawk river, which enters from the right at Cohoes.

Records available.— 1888 to December 31, 1914.

Drainage area.— 4,500 square miles.

Gage.— Recording gage installed at the dam in the summer of 1910 for the purpose of obtaining a more accurate register of the daily flow over the crest of the dam; previous to 1910 two gage readings daily on the crest of the dam.

Discharge measurements.— Determinations of discharge for periods previous to the summer of 1910 computed by using two daily gage readings on the crest of the dam and continuous record of the run of the wheels in the adjoining paper mill. In 1904 the dam was raised and a concrete crest and apron were added, so that it now has a rounded, or ogee section. A discharge curve has been calculated by means of coëfficients derived from the United States Geological Survey experiments on dams of ogee section.

Accuracy.— Records at this section are very carefully made and may be considered good for this type of station.

Coöperation.— Records are computed and furnished by Mr. R. P. Bloss, engineer of the West Virginia Pulp & Paper Co.

Daily Discharge, in Second-feet, of Hudson River at West Virginia Pulp and Paper Co.'s Mill (Upper Dam), Mechanicville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	3,632	8,183	881	27,337	30,433	5,342	1,209	1,141	4,925	1,020	*a* 925	4,154
2......	3,631	5,841	1,684	37,606	35,674	3,696	1,502	584	4,287	990	947	4,374
3......	2,590	5,046	4,032	30,541	27,746	3,624	5,506	1,930	3,220	1,068	1,070	4,162
4......	859	5,220	4,413	26,330	23,920	4,155	3,500	1,179	2,725	1,020	769	5,450
5......	1,945	5,847	4,129	28,308	19,824	2,877	3,395	1,175	3,171	1,091	910	6,542
6......	1,823	4,551	4,126	23,501	23,346	3,836	1,958	1,217	1,800	1,454	906	3,935
7......	1,887	4,566	3,844	20,712	21,359	2,778	3,342	1,053	2,607	1,863	913	4,938
8......	2,161	3,246	1,066	30,356	18,598	3,339	1,665	963	1,706	1,472	900	2,999
9......	2,115	3,746	3,981	42,298	18,233	3,587	2,558	462	2,825	1,405	910	1,884
10......	2,399	4,033	3,986	35,189	14,315	2,284	2,177	1,322	1,559	1,115	917	3,515
11......	920	4,006	4,146	30,042	14,072	2,822	2,417	883	2,825	*a* 850	1,200	3,817
12......	3,249	3,211	2,572	31,924	12,492	2,430	2,415	1,757	1,557	904	963	2,846
13......	2,243	2,116	2,742	28,511	15,545	2,588	2,474	1,039	546	1,401	898	1,827
14......	2,293	2,192	4,036	25,611	12,983	1,016	2,862	1,050	1,712	1,242	1,039	2,314
15......	2,169	876	849	24,362	13,381	2,225	2,860	1,057	2,766	1,191	1,097	1,273
16......	1,875	1,767	4,359	22,612	10,654	2,457	2,482	938	1,846	887	1,525	1,705
17......	1,718	1,769	11,040	25,045	7,425	2,459	1,591	1,027	1,656	1,180	4,116	1,404
18......	927	1,767	8,683	26,922	9,023	1,905	1,938	930	1,053	*a* 750	4,727	1,404
19......	1,235	1,755	7,125	29,690	7,741	1,165	1,144	2,104	1,054	969	4,838	1,404
20......	1,472	1,861	5,837	52,639	6,901	2,684	1,788	1,226	1,097	1,114	4,464	954
21......	1,631	1,861	4,928	57,498	6,071	968	2,410	1,265	1,587	1,415	3,420	1,627
22......	1,488	865	3,505	64,788	6,160	1,644	2,407	2,475	1,416	1,763	2,069	2,241
23......	1,562	2,041	3,687	50,945	5,701	1,588	2,015	*a* 950	1,094	1,113	4,245	1,835
24......	1,655	2,003	5,256	41,109	4,131	1,471	1,461	1,290	1,106	2,232	4,003	2,125
25......	940	2,087	6,120	35,016	6,009	1,328	1,323	2,203	1,143	*a*1,500	1,964	1,746
26......	2,785	1,818	12,371	32,000	4,774	1,199	949	2,563	970	1,415	2,347	2,634
27......	3,003	1,822	21,685	32,424	4,998	970	1,205	1,804	900	1,817	1,847	950
28......	3,142	1,773	27,672	30,052	5,006	404	1,972	1,059	1,166	1,415	2,786	1,115
29......	3,659	......	22,200	31,626	4,973	1,888	1,264	2,576	2,203	913	2,878	1,665
30......	5,827	......	21,607	35,824	4,924	1,043	1,247	952	1,376	924	4,240	1,998
31......	5,798	......	19,804	......	4,042	......	1,277	4,898	......	920	......	1,452
Mean...	2,310	3,070	7,500	33,700	12,900	2,330	2,140	1,450	1,930	1,240	2,130	2,590

Flash boards on dam from January 1 to March 2, 1914, inclusive.
Flash boards partially gone from March 3 to April 3, inclusive. Flow not accurate.
a Discharge estimated.

Monthly Discharge of Hudson River at West Virginia Pulp and Paper Co.'s Mill (Upper Dam), Mechanicville

[Drainage area, 4,500 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January..........................	5,827	*a* 859	2,310	0.513	0.59
February..........................	8,183	*a* 865	3,070	0.682	0.71
March..........................	27,672	*a* 849	7,500	1.67	1.92
April..........................	64,788	20,712	33,700	7.49	8.36
May..........................	35,674	*a* 4,042	12,900	2.87	3.31
June..........................	5,342	*a* 404	2,330	0.518	0.58
July..........................	5,506	*a* 949	2,140	1.476	0.55
August..........................	4,898	*a* 462	1,450	0.322	0.37
September..........................	4,925	*a* 546	1,930	0.429	0.48
October..........................	2,232	*a* 750	1,240	0.276	0.32
November..........................	4,838	769	2,130	0.473	0.53
December..........................	6,542	950	2,590	0.576	0.66
The year..........................	64,788	404	6,090	1.35	18.38

a Sunday.

HUDSON RIVER AT CROCKER'S REEF DAM

A gage was established above Crocker's reef 450 feet upstream from the head of Thompson island April 11, 1904, by this Department. The reef has since been submerged by construction of a dam for the Barge canal. The gage is a painted scale subdivided to tenths of a foot from zero to 18 feet and is attached to the downstream side of a large elm tree. The gage zero is at elevation 114.86. The regular observer is John H. Donnelly, Jr.

Crocker's reef dam crosses the Hudson river at the upper end of Thompson island about six miles below Fort Edward. This dam, which was constructed in connection with the New York Barge canal, is of concrete masonry and has an ogee cross-section. The crest is at elevation 119.00, Barge canal datum, and was trowelled down to a uniform level during construction. This was done with care and accuracy, to provide for the use of the dam as a gaging weir. The dam was completed August 27, 1907. Computations of discharge have been made, beginning September 1, 1907.

The entire flow of the Hudson river passes over this dam, excepting what is carried past the dam in the present Champlain canal. The accompanying tables show the flow of the river proper, not including the flow in Champlain canal. The discharge over the dam has been computed, using a variable coëfficient, the coefficient used being 3.09 for low stages of the stream, but increasing as depth on crest increases. It is assumed that the natural slope in the channel from the gage down to the dam is approximately equal to the head due to velocity of approach and that the two elements counterbalance, no separate correction for velocity of approach being made.

At higher stages of the stream the Crocker's reef dam becomes submerged and the discharge is less than for an unsubmerged weir with the same depth on the crest. The flow for higher stages has been reduced to take into account the effect of submergence.

For table of elevations of water-surface above dam, see page 214.

Daily Discharge, in Second-feet, of Hudson River at Crocker's Reef Dam

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	2,050	1,250	1,550	14,098	27,700	3,550	1,100	1,250	3,550	1,100	702	3,550
2.....	1,700	2,950	1,700	17,608	22,775	1,700	1,400	1,100	2,950	1,250	1,100	2,199
3.....	1,550	2,199	2,950	18,015	21,000	1,875	2,750	1,100	1,875	1,550	1,400	3,550
4.....	1,550	2,549	1,700	17,608	16,050	2,050	2,199	1,400	1,700	1,250	1,250	5,775
5.....	1,700	2,199	2,199	16,825	14,900	1,700	1,700	1,250	1,700	965	1,400	4,950
6.....	1,700	2,549	2,050	14,499	15,650	1,550	1,550	965	1,100	1,400	1,100	3,770
7.....	1,700	1,875	2,050	12,225	14,499	1,400	1,550	1,100	830	1,550	1,100	4,236
8.....	1,700	1,100	1,250	12,975	14,499	2,199	2,050	965	1,400	1,550	702	2,750
9.....	1,700	2,199	2,050	20,600	12,225	1,550	1,550	1,100	2,050	1,550	1,100	3,150
10.....	1,550	2,348	2,348	20,600	10,032	1,700	1,875	1,250	1,550	1,250	1,400	2,348
11.....	1,400	2,199	1,700	20,600	10,032	1,400	1,700	1,550	1,550	702	965	2,050
12.....	1,700	1,400	1,700	19,825	8,400	1,400	1,250	1,250	1,250	1,400	1,100	1,875
13.....	1,400	1,550	1,550	18,358	9,000	1,700	1,700	1,250	1,100	1,400	1,250	1,250
14.....	1,700	2,050	1,875	16,450	8,400	1,875	2,549	1,250	1,250	1,250	830	1,400
15.....	1,400	1,100	1,700	16,050	9,350	702	1,875	965	2,050	1,100	830	1,250
16.....	1,550	2,050	1,700	16,825	7,479	1,700	1,400	702	1,700	1,550	1,250	1,250
17.....	1,400	1,700	1,875	16,450	6,600	1,550	1,700	1,100	1,700	1,550	2,549	965
18.....	965	2,050	2,348	17,608	6,050	1,400	1,875	1,250	1,250	965	4,716	965
19.....	2,050	2,050	2,549	21,000	6,600	1,550	1,250	1,250	1,250	965	3,990	702
20.....	1,700	2,050	2,750	31,950	5,225	1,550	1,250	1,100	965	1,250	2,549	575
21.....	1,550	2,199	2,050	50,300	3,990	1,875	1,550	1,400	1,250	1,250	1,875	1,400
22.....	1,400	1,250	1,400	49,458	5,225	1,400	1,875	1,250	1,550	1,400	1,700	1,250
23.....	1,550	2,348	2,348	39,900	3,350	1,700	1,400	965	1,250	1,550	2,750	1,550
24.....	1,700	2,050	2,348	30,350	3,150	1,250	1,550	1,250	1,400	1,550	1,875	1,250
25.....	702	2,348	2,348	24,650	4,716	1,250	1,550	1,250	1,700	965	2,050	965
26.....	1,700	2,050	2,199	23,525	3,770	1,100	1,250	1,100	1,250	1,250	1,875	1,875
27.....	1,250	2,199	3,770	23,900	2,750	1,250	1,400	1,100	1,250	1,400	1,250	830
28.....	1,875	1,700	7,158	23,525	3,350	965	1,250	1,700	1,100	1,100	2,199	965
29.....	1,875	......	9,700	23,525	3,350	830	1,100	2,199	1,250	1,250	2,199	1,400
30.....	1,875	......	11,850	26,900	3,990	830	965	1,875	1,550	1,250	3,550	2,050
31.....	2,199	......	12,600	......	1,700	......	1,100	4,236	......	1,250	.....	965
Mean...	1,608	1,984	3,141	22,540	9,220	1,552	1,589	1,338	1,544	1,283	1,754	2,034

Monthly Discharge of Hudson River at Crocker's Reef Dam
[Drainage area, 2,959 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	2,199	702	1,608	0.543	0.626
February	2,950	1,100	1,984	0.670	0.698
March	12,600	1,250	3,141	1.06	1.222
April	50,300	12,225	22,540	7.62	8.502
May	27,700	1,700	9,220	3.12	3.597
June	3,550	702	1,552	0.525	0.586
July	2,750	965	1,589	0.537	0.619
August	4,236	702	1,338	0.452	0.521
September	3,550	830	1,544	0.522	0.582
October	1,550	702	1,283	0.433	0.499
November	4,716	702	1,754	0.593	0.662
December	4.950	575	2,034	0.687	0.792
The year	50,300	575	4,120	1.392	18.906

HUDSON RIVER AT SPIER FALLS

Location.— On the river road, one-half mile below the Spier Falls dam, about 11½ miles below the mouth of Sacandaga river. This station is most easily accessible from Glens Falls, N. Y.; distance 11 miles.

Records available.— October 7, 1912, to December 31, 1914.

Drainage area.— 2,800 square miles. (Measured on U. S. G. S. topographic sheets.)

Gage.— Recording hydrograph and auxiliary sloping staff gage. The automatic gage is in a brick shelter five feet square inside dimensions. Underneath the shelter is a brick well 3½ feet square and 21 feet deep. This well is connected with the river by a 4-inch cast iron water pipe 78 feet long. A shear gate valve is set at the inner end of the pipe for use in cleaning the well when necessary. The outer end is fastened firmly in a concrete anchorage and is submerged at all stages. Inside the well is a hook gage used for setting the automatic gage. The sloping staff gage is mounted on small concrete piers 10 feet upstream from the shelter.

Control.— Coarse gravel and boulders.

Discharge measurements.— Made from a cable and car, located about 1,000 feet downstream from the automatic gage.

Winter flow.— Backwater from ice prevails only during extreme cold weather.

Regulation.— There is a large diurnal fluctuation in flow due to the operation of Spier Falls power plant.

Accuracy.— Rating curve well defined. Estimates as published are excellent.

Coöperation.— The gage is operated by Mr. Geo. C. Fifield, chief operator at the power plant. Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Hudson River at Spier Falls

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Mar. 12	W. S. Easterly	3.34	2,350
April 21	O. W. Hartwell	15.12	51,900
24	C. S. De Golyer	*a*11.75	32,600
24	W. S. Easterly	*a*11.65	32,000
June 9	C. H. Pierce	3.50	2,720

a Staff gage reading.

Daily Discharge, in Second-feet, of Hudson River at Spier Falls

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	1,860	1,940	943	14,000	29,900	2,620	1,260	1,130	3,670	1,580	1,100	3,210
2.....	1,860	2,480	2,180	16,900	26,700	2,450	4,710	1,000	2,740	1,530	1,210	3,220
3.....	1,500	2,190	1,490	18,200	......	2,210	3,420	1,230	2,400	1,320	998	5,070
4.....	698	2,180	1,830	18,500	17,500	2,150	1,940	1,330	2,340	918	1,430	6,150
5.....	1,710	2,120	1,290	18,200	16,100	2,300	1,370	1,280	2,140	1,490	1,320	5,290
6.....	1,930	2,460	1,590	15,100	17,300	1,880	1,720	1,200	1,560	1,430	1,270	4,290
7.....	1,740	1,890	1,670	12,900	15,800	1,660	1,640	1,260	1,430	1,400	1,160	3,340
8.....	1,730	1,770	1,280	13,500	15,000	2,270	1,850	1,190	2,280	1,360	490	2,970
9.....	1,470	2,560	2,000	21,900	12,000	2,010	1,960	1,100	2,060	1,390	1,540	2,980
10.....	1,830	2,280	1,790	23,100	10,600	2,060	1,980	1,430	1,930	1,230	1,130	2,930
11.....	1,270	1,800	1,510	22,700	9,480	1,550	1,720	1,730	1,500	1,080	1,140	2,620
12.....	1,670	1,070	1,630	21,700	8,270	1,980	1,420	1,380	1,410	1,380	1,040	2,340
13.....	1,610	1,430	1,520	20,100	9,050	1,950	2,170	1,440	1,300	1,410	1,110	1,490
14.....	1,250	1,840	2,030	18,000	9,300	1,390	2,420	1,420	2,240	1,450	1,040	1,710
15.....	1,010	1,340	1,350	17,800	9,130	1,840	2,060	1,140	1,660	1,450	972	1,710
16.....	1,290	1,320	1,520	18,500	8,080	1,720	1,760	615	1,520	1,390	2,570	1,350
17.....	1,220	1,390	1,710	17,600	7,600	1,270	1,920	1,430	1,500	1,250	3,800	1,360
18.....	1,510	1,480	2,030	20,600	6,320	1,570	1,640	1,430	1,560	955	4,600	1,240
19.....	1,800	1,420	2,600	26,000	6,150	1,800	1,320	1,300	1,600	1,430	3,560	963
20.....	1,460	1,570	2,130	38,500	4,850	1,460	1,930	1,250	1,250	1,560	2,630	993
21.....	1,540	1,310	2,060	50,100	4,510	1,280	1,930	1,810	1,520	1,780	2,590	2,000
22.....	1,420	1,620	1,250	47,700	4,700	1,190	1,480	1,740	1,550	1,750	2,480	1,900
23.....	1,420	1,210	2,560	41,300	3,480	950	1,300	1,120	1,560	1,830	2,850	1,770
24.....	1,580	1,350	2,110	34,200	3,680	1,050	1,400	2,220	1,580	1,900	2,340	1,770
25.....	1,860	1,470	1,760	27,900	4,260	982	1,230	1,990	1,480	1,080	2,110	1,720
26.....	1,840	1,380	1,770	26,900	3,070	1,090	1,340	1,510	1,750	1,530	1,300	1,490
27.....	2,030	1,350	2,570	26,500	3,770	1,430	1,560	1,380	1,140	1,210	2,460	......
28.....	1,840	1,720	5,820	26,300	3,600	756	1,300	2,010	1,730	1,270	2,960	2,060
29.....	1,970	......	9,000	26,800	3,880	951	1,330	1,650	1,350	1,120	3,480	1,440
30.....	1,740	......	10,500	30,400	2,800	1,640	1,310	3,710	1,290	1,130	3,520	1,430
31.....	1,640	......	11,800	......	2,670	......	1,280	4,190	......	1,030	......	1,510
Mean...	1,590	1,710	2,750	24,400	9,660	1,650	1,800	1,570	1,770	1,380	2,070	2,370

NOTE.— Discharge relation affected by ice from February 13 to March 9, inclusive. Daily discharge during this period computed from records at the Spier Falls power plant. Discharges for the remainder of the year are the mean of 24 hourly values for each day. Discharge determined from a well-defined rating curve.

Monthly Discharge of Hudson River at Spier Falls

[Drainage area, 2,800 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January....................	2,030	*a*698	1,590	0.568	0.65	A
February....................	2,560	1,070	1,710	0.611	0.64	B
March....................	11,800	*a*943	2,750	0.982	1.13	A
April....................	50,100	12,900	24,400	8.71	9.72	A
May....................	29,900	*a*2,670	9,660	3.45	3.98	A
June....................	2,620	*a*756	1,650	0.589	0.66	A
July....................	4,710	1,230	1,800	0.643	0.74	A
August....................	4,190	*a*615	1,570	0.561	0.65	A
September....................	3,670	*a*1,140	1,770	0.632	0.71	A
October....................	1,900	*a*918	1,380	0.493	0.57	A
November....................	4,600	*a*490	2,070	0.739	0.82	A
December....................	6,150	963	2,370	0.846	0.98	A
The year....................	50,100	490	4,382	1.56	21.25	.....

a Sunday.

NOTE.— No correction made in the above table for seasonal regulation of flow.

HUDSON RIVER AT THURMAN

Location.—At the Delaware & Hudson Railroad bridge leading from Thurman to Warrensburg, about 950 feet below the highway bridge to Warrensburg, about 2,000 feet below the mouth at Schroon river and about 13 miles above the mouth of Sacandaga river, which enters from the right.

Records available.— September 1, 1907, to December 31, 1914.

Drainage area.— 1,550 square miles.

Gage.— Chain; read twice daily; datum unchanged.

Control.— Sand and gravel; liable to shift.

Discharge measurements.— Made from the bridge.

Regulation.— The influence of storage at Indian lake and of mills on Schroon river is apparent at this station.

Winter flow.— Discharge relation affected by ice. Winter flow estimated from the determinations of combined flow at Riverbank and North Creek plus an estimated inflow between the two stations.

Accuracy.—Accuracy of the records somewhat impaired by reason of accumulation of logs at the control point below the section and also around the piers of the bridge, which affect the discharge rating. Rating curve fairly well defined for normal conditions and determinations of flow during the open-water season are considered fairly accurate.

Coöperation.— Gage heights from December to March, inclusive, furnished by Albany office of United States Weather Bureau. Gage heights from May to September, inclusive, furnished by the International Paper Co. Discharge by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Hudson River at Thurman

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
April 23	W. S. Easterly	7.85	17,300
May 6	C. S. De Golyer	5.86	9,380
Dec. 29 *a*	C. S. De Golyer	3.89	644

a Measurement made through ice, 500 feet above gage.

Daily Gage Height, in Feet, of Hudson River at Thurman

1914	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.5	7.30	3.00	3.05	2.63	3.15	2.80	2.60	4.60
2	6.3	6.80	2.94	4.50	2.58	2.79	2.70	2.64	4.10
3	6.0	6.10	2.97	3.70	2.86	2.84	2.74	2.71	3.75
4	5.5	5.60	2.86	2.49	2.86	2.83	2.62	2.66	3.80
5	5.2	5.50	3.00	2.44	2.80	2.78	2.79	2.54	3.65
6	5.0	5.60	3.00	2.62	2.81	2.52	2.68	2.60	3.45
7	4.8	6.00	2.82	3.05	2.78	2.66	2.67	2.63	3.30
8	4.9	5.40	2.82	2.81	2.76	2.68	2.68	2.46	3.20
9	5.4	4.60	2.84	2.78	2.67	2.62	2.70	2.69	3.05
10	5.6	4.60	2.88	2.75	2.84	2.90	2.76	2.66	2.92
11	5.7	4.40	3.00	2.70	2.94	2.94	2.65	2.52	2.80
12	5.8	4.70	2.91	2.90	2.92	3.00	2.72	2.50	2.62
13	5.6	4.10	3.00	3.10	2.90	2.96	2.66	2.72	2.70
14	5.4	4.70	2.43	2.86	2.78	3.00	2.64	2.70	2.49
15	5.5	4.00	2.72	2.88	2.90	2.94	2.65	2.46	2.70
16	5.6	4.50	2.85	2.78	2.76	2.90	2.65	3.20	3.20
17	5.8	3.70	3.10	2.66	2.87	2.84	2.76	3.70	4.00
18	6.1	4.30	3.00	2.78	2.84	2.94	2.70	3.55	3.90
19	7.2	3.75	2.92	2.79	2.88	2.92	2.88	3.35	3.85
20	9.3	3.60	2.95	3.00	2.86	2.81	2.86	3.35	4.40
21	9.7	4.40	2.34	2.93	3.00	2.94	2.74	3.20	4.30
22	8.8	3.30	2.80	2.86	3.05	2.70	2.81	3.25	4.30
23	7.9	3.40	2.85	2.80	2.88	2.70	2.79	4.10	......
24	7.2	3.90	2.81	2.76	3.05	2.69	2.74	5.40	4.40
25	6.7	3.35	2.96	2.72	2.88	2.82	2.67	5.00	4.20
26	6.8	3.50	2.78	2.62	2.98	2.79	2.80	5.20	......
27	6.9	3.70	2.84	2.81	2.90	2.86	2.69	5.30	3.90
28	6.9	4.10	2.54	2.76	2.93	2.78	2.78	4.80	4.00
29	7.2	3.30	2.96	2.75	3.10	2.76	2.60	4.80	3.80
30	7.8	3.05	3.00	2.76	3.30	2.74	2.55	4.80	......
31	......	3.55	......	2.62	3.40	......	2.65	......	......

NOTE.— Mean daily gage heights for April are based on three or four observations per day. Gage heights for the remainder of the year are means of two observations per day.

Discharge relation affected by ice, November 22 to December 2 and December 15 to 31, inclusive.

Daily Discharge, in Second-feet, of Hudson River at Thurman

1914	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11,700	14,900	1,370	1,460	809	1,640	1,040	770	......
2	11,000	12,900	1,270	5,000	746	1,030	900	822	......
3	9,860	10,200	1,320	2,840	1,140	1,100	956	914	2,960
4	8,100	8,440	1,140	639	1,140	1,090	796	848	3,080
5	7,100	8,100	1,370	584	1,040	1,010	1,030	698	2,720
6	6,470	8,440	1,370	796	1,060	674	874	770	2,260
7	5,870	9,860	1,070	1,460	1,010	848	861	809	1,940
8	6,170	7,760	1,070	1,060	984	874	874	606	1,740
9	7,760	5,290	1,100	1,010	861	796	900	887	1,460
10	8,440	5,290	1,170	970	1,100	1,200	984	848	1,230
11	8,790	4,710	1,370	900	1,270	1,270	835	674	1,040
12	9,140	5,580	1,220	1,200	1,230	1,370	928	650	796
13	8,440	3,860	1,370	1,550	1,200	1,300	848	928	900
14	7,760	5,580	573	1,140	1,010	1,370	822	900	639
15	8,100	3,590	928	1,170	1,200	1,270	835	606	......
16	8,440	5,000	1,120	1,010	984	1,200	835	1,740	......
17	9,140	2,840	1,550	848	1,150	1,100	984	2,840	......
18	10,200	4,420	1,370	1,010	1,100	1,270	900	2,480	......
19	14,500	2,960	1,230	1,030	1,170	1,230	1,170	2,040	......
20	24,100	2,600	1,280	1,370	1,140	1,060	1,140	2,040	......
21	26,100	4,710	480	1,250	1,370	1,270	956	1,740	......
22	21,600	1,940	1,040	1,140	1,460	900	1,060	......	......
23	17,500	2,150	1,120	1,040	1,170	900	1,030	......	......
24	14,500	3,330	1,060	984	1,460	887	956	......	......
25	12,500	2,040	1,300	928	1,170	1,070	861	......	......
26	12,900	2,370	1,010	796	1,340	1,030	1,040	......	......
27	13,300	2,840	1,100	1,060	1,200	1,140	887	......	......
28	13,300	3,860	698	984	1,250	1,010	1,010	......	......
29	14,500	1,940	1,300	970	1,550	984	770	......	......
30	17,000	1,460	1,370	984	1,940	956	710	......	......
31	......	2,480	......	796	2,150	......	835	......	......
Mean	11,800	5,210	1,160	1,230	1,210	1,090	923	1,210	1,160

NOTE.— Daily discharge determined from a well-defined rating curve.

Monthly Discharge of Hudson River at Thurman

[Drainage area, 1,550 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January	....	....	994	0.641	0.74	C
February	....	....	1,130	0.729	0.76	C
March	....	....	1,350	0.871	1.00	C
April	26,100	5,870	11,800	7.61	8.49	A
May	14,900	1,460	5,210	3.36	3.87	A
June	1,550	480	1,160	0.748	0.83	B
July	5,000	584	1,230	0.794	0.92	B
August	2,150	746	1,210	0.781	0.90	B
September	1,640	674	1,090	0.703	0.78	B
October	1,170	710	923	0.595	0.69	B
November	2,840	606	1,210	0.781	0.87	B
December	3,080	....	1,160	0.748	0.86	C
The year	26,100	480	2,366	1.53	20.71	.....

NOTE.— Mean discharge for January, February and March, computed from the combined flow at North Creek and Riverbank plus an estimated inflow between these points and Thurman. Estimated mean discharge, November 22 to December 2, 1,450 second-feet, and December 15 to 31, inclusive, 675 second-feet.

HUDSON RIVER AT NORTH CREEK

Location.—At the highway bridge in the village of North Creek, immediately above the mouth of North creek.

Records available.— September 21, 1907, to December 31, 1914.

Drainage area.— 804 square miles.

Gage.— Chain, read twice daily; datum, unchanged.

Control.— Heavy gravel; considered fairly permanent.

Discharge measurements.— Made from the two-span steel highway bridge.

Regulations.— The numerous lakes and ponds in the basin of the upper Hudson have a decided effect on the low-water flow; especially is this true of Indian lake. The use of these storage reservoirs in the spring in connection with log driving makes the daily records somewhat uncertain.

Winter flow.— Discharge relation affected by ice. This effect varies gradually after the ice cover is formed and can be determined by frequent discharge measurements.

Accuracy.— Discharge rating curve well defined. Determinations of discharge for open-water periods considered good.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Hudson River at North Creek

DATE		Made by	Gage height	Discharge
1914			*Feet*	*Sec.-ft.*
Jan.	13[a]	C. S. De Golyer	3.37	442
	26[b]	C. S. De Golyer	3.93	656
Feb.	3[c]	R. S. Barnes	4.08	814
	16[b]	W. S. Easterly	4.20	687
Mar.	9[d]	R. S. Barnes	4.46	728
April	28	C. S. De Golyer	6.11	6,380
May	4	C. S. De Golyer	4.79	3,460
	4	C. S. De Golyer	4.77	3,540
Sept.	14	E. D. Burchard	3.12	1,100
Oct.	8[e]	C. S. De Golyer	2.92	693
Dec.	28[f]	C. S. De Golyer	3.45	301

[a] Measurement made through ice about 1,500 feet above gage.
[b] Measurement made through ice about 200 feet below gage.
[c] Measurement made through ice about 150 feet below gage.
[d] Measurement made through ice about 300 feet below gage.
[e] Measurement made by wading 50 feet below gage.
[f] Measurement made from bridge and through ice at upstream side of bridge.

Daily Gage Height, in Feet, of Hudson River at North Creek

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	4.10	4.30	4.40	6.70	2.60	4.60	2.85	3.20	3.00	2.70	3.00
2	......	4.10	4.40	4.60	6.30	2.60	5.50	2.85	3.05	3.00	2.70	3.90
3	......	4.10	4.40	4.60	4.70	2.60	4.10	2.85	2.90	3.00	2.70	4.00
4	......	4.00	4.50	4.40	4.60	2.50	3.30	2.85	2.75	3.00	2.70	4.00
5	......	4.00	4.40	4.30	5.30	2.75	3.55	2.80	2.60	2.95	2.70	4.00
6	......	4.00	4.50	3.95	5.20	2.65	4.50	2.80	2.60	2.90	2.70	3.90
7	......	4.10	4.50	3.70	5.80	2.70	3.95	2.80	2.60	2.90	2.70	3.65
8	......	4.00	4.50	3.80	5.30	2.70	2.85	3.00	2.60	2.90	2.07	3.25
9	......	4.00	4.50	4.80	4.20	2.60	2.80	3.10	2.60	2.90	2.38	3.25
10	......	4.00	4.50	4.80	5.20	2.70	2.70	3.00	3.00	2.90	2.50	3.20
11	......	4.00	4.50	4.70	4.40	2.50	2.70	3.00	3.10	3.00	2.65	3.00
12	......	4.00	4.50	4.50	4.20	2.46	3.40	3.00	3.05	2.95	2.65	2.85
13	3.40	4.00	4.50	4.30	3.55	2.42	3.55	3.00	3.05	2.90	2.65	2.75
14	3.65	4.20	4.40	4.00	3.10	2.38	3.15	3.00	3.10	2.90	2.65	2.70
15	3.80	4.20	4.50	4.30	3.50	2.28	3.00	3.00	3.10	2.90	2.75	2.50
16	3.90	4.20	4.50	4.30	3.40	2.75	2.90	3.00	3.10	2.85	3.50	2.60
17	3.90	4.20	4.50	4.60	3.15	2.75	2.90	3.00	3.05	2.85	4.00	2.60
18	3.85	4.20	4.50	4.90	3.65	2.40	3.00	3.00	3.05	2.85	3.65	2.60
19	3.80	4.30	4.50	6.40	3.05	2.28	3.10	3.00	3.00	2.85	3.50	2.50
20	3.85	4.50	4.50	9.40	3.00	2.45	3.10	3.10	3.00	2.80	3.40	3.75
21	3.90	4.50	4.50	8.90	3.75	2.35	3.10	3.15	3.00	2.85	3.35	3.75
22	3.90	4.50	4.40	7.80	2.90	2.42	3.00	3.15	3.00	2.95	3.20	3.75
23	3.90	4.50	4.40	6.80	3.05	2.38	3.00	3.15	3.00	2.90	3.00	3.70
24	3.90	4.40	4.30	6.00	4.50	2.30	2.95	3.15	3.00	2.85	2.90	3.65
25	3.95	4.40	4.40	5.70	2.85	2.30	2.95	3.15	3.00	2.85	2.80	3.50
26	3.95	4.40	4.40	5.80	3.45	2.40	2.90	3.10	3.00	2.85	2.80	3.20
27	3.95	4.40	4.60	6.40	3.40	2.60	2.90	3.10	3.00	2.80	3.00	3.15
28	4.00	4.40	5.20	7.00	4.30	2.65	2.90	3.10	3.00	2.80	3.30	3.15
29	4.00	......	5.90	7.30	2.90	2.70	2.90	3.15	3.00	2.80	3.00	3.80
30	3.95	......	6.00	7.60	2.75	2.80	2.90	3.15	3.00	2.80	3.00	3.95
31	4.00	......	5.20	......	2.50	......	2.90	3.60	......	2.75	......	3.90

NOTE.— Discharge relation affected by ice, January 1 to March 31 and December 15 to 31 nclusive.

Daily Discharge, in Second-feet, of Hudson River at North Creek

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	480	832	600	2,910	8,330	450	3,290	642	1,000	780	520	780
2......	480	832	685	3,290	7,220	450	5,200	642	832	780	520	2,010
3......	480	814	685	3,290	3,480	450	2,360	642	685	780	520	2,180
4......	480	780	732	2,910	3,290	385	1,120	642	560	780	520	2,180
5......	480	780	732	2,720	4,740	560	1,460	600	450	732	520	2,180
6......	480	732	732	2,100	4,520	485	3,100	600	450	685	520	2,010
7......	480	780	780	1,680	5,930	520	2,100	600	450	685	520	1,600
8......	480	780	780	1,840	4,740	520	642	780	450	685	174	1,060
9......	480	732	732	3,680	2,540	450	600	885	450	685	314	1,060
10......	470	640	780	3,680	4,520	520	520	780	780	685	385	1,000
11......	460	640	780	3,480	2,910	385	520	780	885	780	485	780
12......	450	600	732	3,100	2,540	361	1,250	780	832	732	485	642
13......	442	642	732	2,720	1,460	337	1,460	780	832	685	485	560
14......	450	685	732	2,180	885	314	942	780	885	685	485	520
15......	560	732	780	2,720	1,390	261	780	780	885	685	560	See
16......	642	687	780	2,720	1,250	560	685	780	885	642	1,390	note
17......	642	685	780	3,290	942	560	685	780	832	642	2,180	......
18......	600	732	780	3,880	1,600	325	780	780	832	642	1,600	......
19......	560	732	780	7,490	832	261	885	780	780	642	1,390	......
20......	600	885	780	17,300	780	355	885	885	780	600	1,250	......
21......	642	885	732	15,300	1,760	298	885	942	780	642	1,180	......
22......	642	885	685	11,600	685	437	780	942	780	732	1,000	......
23......	642	780	685	8,620	832	314	780	942	780	685	780	......
24......	642	732	642	6,430	3,100	270	733	942	780	642	685	......
25......	685	732	642	5,680	642	270	733	942	780	642	600	......
26......	656	685	685	5,930	1,320	325	685	885	780	642	600	......
27......	685	685	780	7,490	1,250	450	685	885	780	600	780	......
28......	732	642	1,000	9,200	2,720	485	685	885	780	600	1,120	301
29......	732	......	1,390	10,100	685	520	685	942	780	600	780	520
30......	685	......	1,920	11,000	560	600	685	942	780	600	780	642
31......	732	......	2,450	......	385	......	685	1,530	......	560	......	600
Mean...	570	741	855	5,610	2,510	413	1,200	822	744	676	771	801

NOTE.— Daily discharge, estimated during the frozen period, January 1 to March 31, is fairly good; December 28 to 31, approximate. Daily discharge for open-water periods determined from a well-defined rating curve. Mean discharge, December 15 to 27, inclusive, estimated, 323 second-feet.

Monthly Discharge of Hudson River at North Creek

[Drainage area, 804 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January....................	732	442	570	0.709	0.82	B
February....................	885	600	741	0.922	0.96	B
March....................	2,450	600	855	1.06	1.22	B
April....................	17,300	1,680	5,610	6.98	7.79	A
May....................	8,330	385	2,510	3.12	3.60	A
June....................	600	261	413	0.512	0.57	B
July....................	5,200	520	1,200	1.49	1.72	A
August....................	1,530	600	822	1.02	1.18	A
September....................	1,000	450	744	0.925	1.03	A
October....................	780	560	676	0.841	0.97	A
November....................	2,180	174	771	0.959	1.07	A
December....................	2,180	....	801	0.996	1.15	B
The year....................	17,300	....	1,308	1.63	22.08	

NOTE.— No correction made for regulation at Indian lake. (See Indian lake records.)

CEDAR RIVER

CEDAR RIVER NEAR INDIAN LAKE

Location.—At the steel highway bridge about 2 miles west of Indian Lake village, on the road leading to Blue Mountain lake, about 12 miles by river above its confluence with the Hudson, 8 miles by river above the mouth of Rock river and 10 miles by river below Cedar river flow (Wakely dam).

Records available.— July 15, 1911, to December 31, 1914.

Drainage area.— 85 square miles. (Measured on U. S. G. S. topographic sheets.)

Gage.— Standard chain and weight. Read once daily.

Control.— Gravel rift about 200 feet below the bridge; fairly permanent.

Discharge measurements.— Made from the bridge at high stages and by wading at low stages.

Storage.— The basin contains many lakes and swamps affording favorable sites for storage reservoirs, which would be influential in regulating the discharge of Hudson river. The most important are Cedar lakes and Cedar river flow. Cedar river flow is controlled by a lumberman's dam and is used principally during the logging season.

Winter flow.— Discharge relation affected by ice during long winter period and observations suspended.

Accuracy.— Rating curve fairly well defined. Extreme fluctuations in stage during logging operations make daily discharge values very uncertain. Monthly estimates for these periods probably fair.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Cedar River near Indian Lake

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
April 30.....	C. S. De Golyer..	10.41	2,910
May 1.....	C. S. De Golyer..	4.72	401
2.....	C. S. De Golyer..	9.76	2,420
Oct. 21......	C. H. Pierce..	3.12	74

Daily Gage Height, in Feet, of Cedar River near Indian Lake

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	5.60	3.20	10.90	2.60	3.70	2.70	2.90	6.00
2	......	......	......	......	10.00	3.10	3.20	2.60	3.80	2.65	2.80	5.50
3	......	......	......	......	6.00	2.80	2.80	2.60	3.60	2.65	2.80	5.70
4	......	......	......	......	6.00	3.05	2.80	2.60	3.20	2.60	3.00	4.60
5	......	......	......	......	10.00	3.15	2.70	2.60	3.20	2.60	3.10	4.00
6	......	......	......	......	7.00	3.00	2.60	2.60	3.40	2.60	3.00	3.60
7	......	......	......	......	......	2.80	2.90	2.60	3.60	3.00	2.90	3.55
8	......	......	......	......	......	2.90	2.95	2.60	3.25	3.30	2.80	3.50
9	......	......	......	......	......	3.00	2.80	2.60	3.20	3.70	2.80	3.50
10	......	......	......	......	......	2.80	2.70	2.80	3.15	3.60	2.60	3.55
11	......	......	......	......	......	2.80	3.00	2.90	3.10	3.60	2.80	3.35
12	......	......	......	......	3.50	2.70	4.30	2.70	3.10	3.40	2.80	3.50
13	......	......	......	......	4.10	2.75	4.00	2.60	3.05	3.35	2.80	3.50
14	......	......	......	......	3.80	2.65	4.10	2.60	3.00	3.30	3.10	3.90
15	......	......	......	......	3.70	2.70	4.00	2.60	3.00	2.90	3.15	3.85
16	......	......	......	5.80	3.70	2.70	3.70	2.60	3.00	2.95	7.10	3.80
17	......	......	......	4.80	3.60	2.65	3.65	2.60	2.90	3.00	7.10	3.80
18	......	......	......	4.60	4.00	2.60	3.40	2.60	2.70	3.00	5.80	3.75
19	......	......	......	6.10	3.60	2.60	3.00	4.20	2.60	3.10	5.70	3.70
20	......	......	......	12.00	3.20	2.80	2.90	4.30	2.60	3.30	5.70	......
21	......	......	......	10.00	3.20	2.70	3.00	5.00	2.55	3.10	4.60	......
22	......	......	......	6.00	3.15	2.60	2.90	5.20	2.50	2.80	4.60	......
23	......	......	......	3.95	5.90	2.60	2.70	4.80	2.55	2.80	4.10	......
24	......	......	......	4.00	4.10	2.60	2.80	5.30	2.80	2.85	3.90	......
25	......	......	......	8.00	5.60	2.55	2.60	3.20	2.90	2.80	3.85	......
26	......	......	......	3.00	5.50	2.60	2.70	3.00	2.70	2.90	3.90	......
27	......	......	......	3.00	4.30	2.60	2.65	3.05	2.80	2.75	4.30	......
28	......	......	......	10.00	3.15	2.80	2.60	4.00	2.70	2.70	6.00	......
29	......	......	......	6.60	2.80	3.40	2.60	5.00	2.70	3.00	6.60	......
30	......	......	......	10.00	9.50	3.00	2.65	5.00	2.80	2.90	6.60	......
31	......	......	......	......	8.20	......	2.70	4.00	......	2.95	......	......

NOTE.— Discharge relation affected by ice, January 1 to April 15, and December 20 to 31, inclusive.

Daily Discharge, in Second-feet, of Cedar River near Indian Lake

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	......	......	......	668	84	3,050	26	164	33	51	810
2	......	......	......	......	2,600	72	84	26	184	30	41	634
3	......	......	......	......	810	41	41	26	146	30	41	702
4	......	......	......	......	810	66	41	26	84	26	61	370
5	......	......	......	......	2,600	78	33	26	84	26	72	226
6	......	......	......	......	1,210	61	26	26	112	26	61	146
7	......	......	......	......	......	41	51	26	146	61	51	137
8	......	......	......	......	......	51	56	26	91	98	41	128
9	......	......	......	......	......	61	41	26	84	164	41	128
10	......	......	......	......	......	41	33	41	78	146	26	137
11	......	......	......	......	......	41	61	51	72	146	41	105
12	......	......	......	......	128	33	296	33	72	112	41	128
13	......	......	......	......	248	37	226	26	66	105	41	128
14	......	......	......	......	184	30	248	26	61	98	72	204
15	......	......	......	......	164	33	226	26	61	51	78	194
16	......	......	......	738	164	33	164	26	61	56	1,250	184
17	......	......	......	422	146	30	155	26	51	61	1,250	184
18	......	......	......	370	226	26	112	26	33	61	738	174
19	......	......	......	848	146	26	61	272	26	72	702	164
20	......	......	......	3,600	84	41	51	296	26	98	702	......
21	......	......	......	2,600	84	33	61	478	23	72	370	......
22	......	......	......	810	78	26	51	538	20	41	370	......
23	......	......	......	215	774	26	33	422	23	41	248	......
24	......	......	......	226	248	26	41	570	41	46	204	......
25	......	......	......	1,640	668	23	26	84	51	41	194	......
26	......	......	......	61	634	26	33	61	33	51	204	......
27	......	......	......	61	296	26	30	66	41	37	296	......
28	......	......	......	2,600	78	41	26	226	33	33	810	......
29	......	......	......	1,040	41	112	26	478	33	61	1,040	......
30	......	......	......	2,600	2,350	61	30	478	41	51	1,040	......
31	......	......	......	......	1,730	......	33	226	......	56	......	......
Mean	......	......	......	*1,190	620	44.2	176	152	68.3	65.5	239	257

NOTE.— Daily discharge determined from a fairly well-defined rating curve. See " Accuracy " in station description.

* April 16 to 30, inclusive.

Monthly Discharge of Cedar River near Indian Lake
[Drainage area, 85 square miles]

1914	Discharge in Second-feet				Run-off	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
April 16–30	3,600	61	1,190	14.00	7.81	D
May	2,600	41	620	7.29	8.40	C
June	112	23	44.2	0.52	0.58	B
July	3,050	26	176	2.07	2.39	D
August	570	26	152	1.79	2.06	C
September	184	20	68.3	0.804	0.90	C
October	164	26	65.5	0.771	0.89	B
November	1,250	26	339	3.99	4.45	B
December 1–19	810	105	257	3.00	2.12	C

NOTE.— Mean discharge, May 7 to 11, inclusive, estimated, 410 second-feet.

INDIAN RIVER

INDIAN RIVER NEAR INDIAN LAKE

Location.—About three-fourths of a mile below State dam, at the outlet of Indian lake, 1 mile above the mouth of Big brook and 8 miles above the point where it enters the Hudson. Big brook is the only important tributary of Indian river below this station.

Records available.— Miscellaneous measurements, 1911; July 1, 1912, to June 30, 1914. Station discontinued.

Drainage area.— 132 square miles. (Measured on U. S. Geological Survey topographic sheets.)

Gage.— Vertical staff, nailed to stump.

Channel.— Pond of still water at head of rocky rapids.

Regulation.— The flow of Indian river is controlled by the operation of the gates at the Indian Lake dam.

Discharge measurements.— Made from a cable about 75 feet below the gage or by wading at head of rapids about 150 feet below.

Winter flow.— Gage heights not seriously affected by ice.

Accuracy.— Discharge rating curve well defined. Conditions for meter measurements fairly good.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Indian River near Indian Lake

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
April 30	C. S. De Golyer	2.50	416
May 1 *a*	C. S. De Golyer	0.46	14.8
1	C. S. De Golyer	3.86	957
Oct. 20	C. H. Pierce	1.68	198

a Measurement made by wading at cable section.

Daily Gage Height, in Feet, of Indian River near Indian Lake

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.05	2.40	2.35	0.20	0.45	0.50	......	......	......	......	......	......
2	0.05	2.40	2.30	0.20	0.45	0.50	......	......	......	......	......	......
3	0.69	2.40	2.25	0.20	0.50	0.55	......	......	......	......	......	......
4	2.60	2.40	2.25	0.20	0.50	0.62	......	......	......	......	......	......
5	2.60	2.40	2.25	0.20	0.55	0.68	......	......	......	......	......	......
6	2.60	2.35	2.20	0.20	0.60	0.70	......	......	......	......	......	......
7	2.60	2.35	2.20	0.20	0.60	0.75	......	......	......	......	......	......
8	2.60	2.35	2.15	0.30	0.60	0.80	......	......	......	......	......	......
9	2.60	2.35	2.15	0.30	0.60	0.80	......	......	......	......	......	......
10	2.50	2.35	2.15	0.30	0.65	0.80	......	......	......	......	......	......
11	2.50	2.35	2.15	0.30	0.65	0.82	......	......	......	......	......	......
12	2.50	2.35	2.15	0.25	0.70	0.82	......	......	......	......	......	......
13	2.50	2.35	2.15	0.25	0.70	0.82	......	......	......	......	......	......
14	2.50	2.35	2.15	0.25	0.90	0.82	......	......	......	......	......	......
15	2.50	2.35	2.15	0.25	1.10	0.80	......	......	......	......	......	......
16	2.50	2.35	2.15	0.25	1.20	0.80	......	......	......	......	......	......
17	2.50	2.30	2.10	0.25	1.30	0.78	......	......	......	......	......	......
18	2.50	2.45	2.10	0.25	1.35	0.78	......	......	......	......	......	......
19	2.45	2.80	2.10	0.30	1.40	0.75	......	......	......	......	......	......
20	2.45	2.80	2.10	0.40	1.40	0.75	......	......	......	......	......	......
21	2.45	2.80	2.10	0.40	1.40	0.75	......	......	......	......	......	......
22	2.45	2.70	2.10	0.40	1.40	0.75	......	......	......	......	......	......
23	2.45	2.70	2.05	0.35	1.45	0.75	......	......	......	......	......	......
24	2.45	2.70	2.05	0.35	1.45	0.75	......	......	......	......	......	......
25	2.45	2.60	2.05	0.35	2.20	0.95	......	......	......	......	......	......
26	2.45	2.50	2.00	0.35	3.20	2.35	......	......	......	......	......	......
27	2.45	2.45	0.97	0.35	1.47	2.30	......	......	......	......	......	......
28	2.40	2.40	0.10	0.40	3.00	2.30	......	......	......	......	......	......
29	2.40	......	0.05	......	1.11	2.30	......	......	......	......	......	......
30	2.40	......	0.05	0.55	0.48	2.30	......	......	......	......	......	......
31	2.40	......	0.05	......	0.48	......	......	......	......	......	......	......

Daily Discharge, in Second-feet, of Indian River near Indian Lake

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	......	385	369	2.00	12	15	......	......	......	......	......	......
2	......	385	353	2.00	12	15	......	......	......	......	......	......
3	30	385	338	2.00	15	18	......	......	......	......	......	......
4	453	385	338	2.00	15	24	......	......	......	......	......	......
5	453	385	338	2.00	18	29	......	......	......	......	......	......
6	453	369	322	2.00	22	31	......	......	......	......	......	......
7	453	369	322	2.00	22	36	......	......	......	......	......	......
8	453	369	307	5.00	22	41	......	......	......	......	......	......
9	453	369	307	5.00	22	41	......	......	......	......	......	......
10	418	369	307	5.00	26	41	......	......	......	......	......	......
11	418	369	307	5.00	26	43	......	......	......	......	......	......
12	418	369	307	3.50	31	43	......	......	......	......	......	......
13	418	369	307	3.50	31	43	......	......	......	......	......	......
14	418	369	307	3.50	53	43	......	......	......	......	......	......
15	418	369	307	3.50	80	41	......	......	......	......	......	......
16	418	369	307	3.50	95	41	......	......	......	......	......	......
17	418	353	292	3.50	111	39	......	......	......	......	......	......
18	418	402	292	3.50	120	39	......	......	......	......	......	......
19	402	526	292	5.00	129	36	......	......	......	......	......	......
20	402	526	292	9.00	129	36	......	......	......	......	......	......
21	402	526	292	9.00	129	36	......	......	......	......	......	......
22	402	489	292	9.00	129	36	......	......	......	......	......	......
23	402	489	278	7.00	138	36	......	......	......	......	......	......
24	402	489	278	7.00	138	36	......	......	......	......	......	......
25	402	453	278	7.00	322	60	......	......	......	......	......	......
26	402	418	264	7.00	322	369	......	......	......	......	......	......
27	402	402	62	7.00	142	353	......	......	......	......	......	......
28	385	385	1	9.00	603	353	......	......	......	......	......	......
29	385	......	......	14.00	82	353	......	......	......	......	......	......
30	385	......	......	18.00	14	353	......	......	......	......	......	......
31	385	......	......	......	14	......	......	......	......	......	......	......

NOTE.— Discharge relation not affected by ice. On days when gates at Indian Lake were changed after January 1, the gage height is weighted, taking into consideration the time of changing gates. Daily discharge determined from a well-defined rating curve. Station discontinued June 30, 1914.

Monthly Discharge of Indian River near Indian Lake
[Drainage area, 132 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January	453.00	....	376.00	2.850	3.29	A
February	526.00	353.00	409.00	3.100	3.23	A
March	369.00	....	260.00	1.970	2.27	A
April	18.50	2.00	5.60	0.042	0.05	B
May	603.00	12.00	97.50	0.739	0.85	A
June	369.00	15.00	89.40	0.677	0.76	A

NOTE.— These figures indicate the flow as regulated at the Indian Lake dam.

INDIAN LAKE RESERVOIR AT INDIAN LAKE

Location.—At the masonry storage dam at the outlet of Indian lake, about 7½ miles above the confluence of Indian river with the Hudson and about 23½ miles above the village of North Creek.

Records available.— July 22, 1900, to December 31, 1914.

Drainage area.— 131 square miles, including about 9.3 square miles of water-surface of Indian lake at the elevation of crest of spillway.

Gages.— Elevation of water-surface in the reservoir is determined by a chain gage on the crest of dam in the angle by the gate house, read once a day. This gage was installed November 17, 1911, to replace a staff gage previously maintained at same point; datum unchanged. Widths of sluice gate openings determined by gage scales at sides of gate stems inside gate house. Current-meter measurements are referred to a vertical staff gage, in three sections, on right bank of stream about three-fourths mile below the dam.

Discharge measurements.— Current-meter measurements made at the cable station about three-fourths mile below the dam.

Discharge ratings.— The records include the discharge through one or both of two 5-foot circular sluice gates when open, ratings for which have been determined by current-meter measurements; the discharge over a spillway, consisting of five sections with a total effective length of 88.7 feet, the rating for which has been prepared by the use of coefficients derived from experiments made in the hydraulic laboratory of Cornell University on a full-size model 6.58 feet in length;[1] and the discharge through two log ways when open.

Regulation.—At ordinary stages the discharge is completely regulated by the operation of the sluice gates. Water is held in storage until needed to supplement the flow of the upper Hudson river during the low-water period. The storage capacity of about 4.7 billion cubic feet provides for a discharge of approximately 600 second-feet for a period of 90 days.

Accuracy.— Occasional errors in records of sluice-gate openings, especially for days when gates are changed, cause corresponding inaccuracy in estimates of discharge. A comparative study of discharge as determined by current-meter rating and observed gage heights at the cable station and the discharge as determined by the sluice-gate ratings from July 1, 1913, to April 30, 1914, shows a maximum difference in the monthly mean discharge, as determined by the different ratings, of 7.6 per cent; the average difference for the 10 months' period was 1.1 per cent.

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[1] See Water Supply Paper 200, pages 190–192.

Maximum and minimum gage heights.— The maximum height of water in the reservoir since its construction was 38.8 feet gage height on March 28, 1913; the minimum stage, 2 feet gage height, was recorded on March 9 to 18, 1907, and January 3 to 17, 1910.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Daily Gage Height, in Feet, of Indian Lake Reservoir at Indian Lake

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	20.30	16.05	10.60	9.25	28.95	33.50	32.85	30.45	22.65	16.50	8.30	9.30
2.....	20.30	15.90	10.45	9.80	29.50	33.50	32.95	30.15	22.80	16.20	8.05	9.60
3.....	20.35	15.80	10.30	10.30	29.95	33.55	33.00	29.85	23.00	15.85	7.80	10.00
4.....	20.35	15.70	10.15	10.70	30.40	33.60	33.05	29.60	23.20	15.50	7.60	10.30
5.....	20.30	15.50	9.95	11.00	31.00	33.70	33.10	29.40	23.35	15.15	7.40	10.55
6.....	20.25	15.30	9.85	11.30	31.65	33.75	33.10	29.10	23.50	14.75	7.20	10.70
7.....	20.20	15.10	9.65	11.50	32.15	33.75	33.20	28.70	23.55	14.50	7.00	10.85
8.....	20.15	14.90	9.45	11.85	32.50	33.80	33.25	28.40	23.60	14.25	6.80	10.95
9.....	20.10	14.75	9.30	12.40	32.75	33.80	33.30	28.05	23.35	13.95	6.60	11.10
10.....	20.05	14.50	9.20	12.95	32.95	33.80	33.40	27.70	23.15	13.65	6.45	11.20
11.....	20.00	14.35	9.00	13.40	33.15	33.85	33.65	27.40	22.95	13.35	6.30	11.30
12.....	19.75	14.20	8.90	13.80	33.25	33.85	33.95	27.05	22.75	12.95	6.15	11.35
13.....	19.50	14.05	8.80	14.15	33.50	33.85	34.05	26.70	22.35	12.65	6.00	11.40
14.....	19.35	13.95	8.60	14.40	33.70	33.80	34.10	26.35	22.10	12.40	5.90	11.45
15.....	19.15	13.80	8.40	14.75	33.85	33.80	34.10	26.00	21.80	12.15	5.75	11.45
16.....	18.95	13.65	8.20	15.10	33.95	33.80	34.05	25.65	21.45	11.90	6.10	11.50
17.....	18.75	13.50	8.00	15.50	34.05	33.80	34.00	25.40	21.15	11.65	6.55	11.55
18.....	18.55	13.30	7.80	16.00	34.10	33.75	33.75	25.10	20.80	11.40	7.10	11.60
19.....	18.35	13.00	7.60	17.05	34.10	33.75	33.55	24.80	20.50	11.30	7.45	11.45
20.....	18.10	12.75	7.40	19.40	34.10	33.75	33.25	24.50	20.20	11.15	7.70	11.25
21.....	17.95	12.50	7.30	21.20	34.10	33.75	33.00	24.20	19.85	10.95	7.95	11.00
22.....	17.80	12.20	7.20	22.20	34.10	33.75	32.80	24.00	19.60	10.70	8.10	10.85
23.....	17.65	11.95	7.10	23.05	34.10	33.75	32.60	23.75	19.25	10.45	8.20	10.70
24.....	17.50	11.65	7.00	23.65	34.10	33.75	32.35	23.40	18.95	10.20	8.35	10.75
25.....	17.30	11.40	6.90	24.20	34.10	33.75	32.10	23.10	18.55	9.95	8.50	10.90
26.....	17.10	11.20	6.80	24.80	33.85	33.65	31.90	22.85	18.20	9.65	8.60	11.00
27.....	16.95	11.00	6.90	25.50	33.70	33.45	31.65	22.55	17.90	9.40	8.70	11.10
28.....	16.75	10.75	7.40	26.40	33.50	33.30	31.35	22.25	17.55	9.20	8.80	11.15
29.....	16.60	......	7.80	27.30	33.40	33.20	31.10	22.30	17.25	9.00	8.90	11.30
30.....	16.40	......	8.30	28.35	33.45	33.05	30.90	22.35	16.85	8.80	9.15	11.35
31.....	16.20	......	8.80	......	33.45	......	30.65	22.45	......	8.55	......	11.40

NOTE.— Sluice gate " B " open 5 feet, January 3 to March 26, May 25 to 28, June 25 to 30, July 17 to August 31, September 8 to 30, inclusive.

Sluice gate " A " open 2.5 feet, February 18 to 24; 1.5 feet, February 25; 1 foot, February 26 to 28; 1.67 feet, August 6 to 31 and September 12 to 30.

Monthly Discharge of Indian Lake Reservoir at Indian Lake
[Drainage area, 131 square miles]

DATE	DISCHARGE IN SECOND-FEET				RUN-OFF	RAINFALL	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	Inches *d*	
1900							
July 22-31	1,290	344	985	0.75	0.28	4.45	B
August	656	*c* 0	355	2.71	3.12	4.27	B
September	781	395	642	4.90	5.47	1.89	B
October	628	430	525	4.01	4.62	2.31	B
November	424	*c* 0	282	2.15	2.40	7.16	B
December	*b* 0	*b* 0	*b* 0	0.00	0.00	4.37	
1901							
January	379	*c* 0	219	1.67	1.92	2.31	B
February	373	185	288	2.20	2.29	0.51	B
March	166	*c* 0	42.8	0.33	0.38	2.95	C
April	*b* 0	*b* 0	*b* 0	0.00	0.00	1.88	
May *a*	463	*c* 0	76.5	0.58	0.67	4.34	D
June *a*	802	*c* 0	296	2.26	2.52	3.83	D
July *a*	839	41	300	2.29	2.64	4.65	D
August	568	*c*	237	1.81	2.09	5.62	B
September	917	*c*	506	3.86	4.31	4.59	B
October	858	*c* 0	350	2.67	3.08	2.99	B
November	812	*c* 0	524	4.00	4.46	1.21	B
December	652	*c* 0	218	1.66	1.91	3.11	C
The year	917	*c* 0	254	1.94	26.27	37.99	
1902							
January	285	*c* 0	182	1.39	1.60	2.01	B
February	670	256	427	3.26	3.40	2.38	B
March	*b* 0	*b* 0	*b* 0	0.00	0.00	1.65	
April	598	*c* 0	147	1.12	1.25	5.68	D
May *a*	1,440	*c* 0	465	3.55	4.09	4.06	D
June *a*	423	151	244	1.86	2.08	5.63	D
July *a*	915	111	460	3.51	4.05	8.31	D
August *a*	599	132	340	2.60	3.00	4.14	C
September	680	*c* 0	354	2.70	3.01	3.28	B
October	975	*c* 0	303	2.31	2.66	5.42	C
November	919	*c* 0	517	3.95	4.41	1.77	B
December	553	*c* 0	302	2.31	2.66	3.55	C
The year	1,440	*c* 0	311	2.37	32.21	47.88	
1903							
January	459	373	400	3.05	3.52	3.38	B
February	373	354	366	2.79	2.90	4.04	B
March	1,060	25	418	3.19	3.68	4:83	B
April *a*	1,560	110	875	6.68	7.45	2.16	B
May *a*	1,710	*c* 0	188	1.44	1.66	0.21	C
June	788	*c* 0	292	2.23	2.49	6.47	C
July	943	*c* 0	273	2.08	2.40	4.68	C
August	718	*c* 0	124	0.95	1.10	4.83	D
September	433	*c* 0	268	2.05	2.29	1.36	C
October	729	*c*	391	2.98	3.44	5.92	B
November	981	197	368	2.81	3.14	1.33	B
December	862	362	671	5.12	5.90	4.15	B
The year	1,710	*c* 0	386	2.94	39.97	43.36	

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a The surface of the reservoir was above the crest of the spillway during the whole or a part of this month. The discharge is computed by using various heights of flash boards which were assumed from a hydrograph study of the lake elevations and records from stations downstream.

b Records show that gates were closed throughout the month; some leakage around the gates and also run-off below the dam but above the cable station give a small discharge at that point.

c Gates closed for one or more days during the month; some discharge at cable station.

d At United States weather bureau station at Indian Lake.

Monthly Discharge of Indian Lake Reservoir at Indian Lake — (Continued)
[Drainage area, 131 square miles]

DATE	DISCHARGE IN SECOND-FEET				RUN-OFF	RAINFALL	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	Inches [d]	
1904							
January	509	337	417	3.18	3.67	3.41	B
February	423	230	316	2.41	2.60	2.23	B
March	231	[c] 0	167	1.27	1.46	3.45	B
April	[b] 0	[b] 0	[b] 0	0.00	0.00	2.44	
May [a]	603	[c] 0	230	1.76	2.03	2.60	C
June [a]	605	[b] 0	55.4	0.42	0.47	2.97	D
July [a]	721	[c] 0	333	2.54	2.93	3.25	C
August	628	[c] 0	328	2.50	2.88	4.08	C
September	846	[c] 0	685	5.23	5.84	5.10	B
October	259	[c] 0	8.4	0.06	0.07	4.25	B
November	596	[c] 0	129	0.98	1.09	0.45	C
December	773	408	652	4.98	5.74	1.78	B
The year	846	[c] 0	277	2.11	28.78	36.01	
1905							
January	569	296	365	2.79	3.22	1.92	B
February	545	400	472	3.60	3.75	1.52	B
March	394	[c] 0	235	1.79	2.06	2.20	C
April	[b] 0	[b] 0	[b] 0	0.00	0.00	3.13	
May	[b] 0	[b] 0	[b] 0	0.00	0.00	1.80	
June [a]	442	[c] 0	62.6	0.48	0.54	9.00	D
July [a]	847	[c] 0	292	2.23	2.57	4.80	C
August [a]	581	[c] 0	186	1.42	1.64	2.40	C
September [a]	751	190	458	3.50	3.90	6.20	C
October [a]	1,060	[c] 0	310	2.37	2.73	2.85	D
November	1,030	93	343	2.62	2.92	1.47	C
December	565	94	156	1.19	1.37	2.81	C
The year	1,060	[c] 0	238	1.82	24.70	40.10	
1906							
January	639	101	452	3.45	3.98	1.91	B
February	949	542	712	5.44	5.66	1.32	C
March	825	621	720	5.49	6.33	3.12	B
April	616	[c] 0	71	0.54	0.60	1.70	C
May	466	[c] 0	231	1.76	2.03	4.88	D
June	776	[c] 0	118	0.90	1.00	4.80	D
July [a]	415	51	187	1.43	1.65	2.90	C
August	915	177	432	3.30	3.80	3.63	C
September	896	580	724	5.53	6.17	3.15	B
October	647	474	551	4.20	4.84	3.57	B
November	467	242	395	3.02	3.37	3.05	B
December	398	[c] 0	229	1.75	2.02	2.40	B
The year	949	[c] 0	400	3.05	41.45	36.43	
1907							
January	398	[c] 0	98.6	0.75	0.86	4.60	C
February	482	241	385	2.94	3.06	0.93	B
March	260	[c] 0	104	0.79	0.91	1.54	D
April	[b] 0	[b] 0	[b] 0	0.00	0.00	3.95	
May	330	[c] 0	27.4	0.21	0.24	3.35	D
June	[b] 0	[b] 0	[b] 0	0.00	0.00	2.80	
July	566	[c] 0	172	1.31	1.51	2.25	D
August	903	478	653	4.98	5.74	1.45	C
September	779	[c] 0	273	2.08	2.32	7.33	C
October	193	[c] 0	9.3	0.07	0.08	4.66	D
November	[b] 0	[b] 0	[b] 0	0.00	0.00	5.90	
December [a]	688	[c] 0	278	2.12	2.44	5.34	D
The year	903	[c] 0	166	1.27	17.16	44.10	

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[a] The surface of the reservoir was above the crest of the spillway during the whole or a part of this month. The discharge is computed by using various heights of flash boards which were assumed from a hydrograph study of the lake elevations and records from stations downstream.

[b] Records show that gates were closed throughout the month; some leakage around the gates and also run-off below the dam but above the cable station give a small discharge at that point.

[c] Gates closed for one or more days during the month; some discharge at cable station.

[d] At United States weather bureau station at Indian Lake.

Monthly Discharge of Indian Lake Reservoir at Indian Lake — (Continued)
[Drainage area, 131 square miles]

DATE	DISCHARGE IN SECOND-FEET				RUN-OFF	RAINFALL	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	Inches *d*	
1908							
January *a*	637	231	345	2.63	3.03	2.68	D
February *a*	756	*c* 0	403	3.08	3.32	5.65	C
March *a*	1,050	*c* 0	769	5.87	6.77	1.97	C
April	3,120	*c* 0	669	5.11	5.70	3.55	D
May	2,960	120	1,100	8.40	9.68	6.10	D
June	324	16	127	0.97	1.08	1.15	C
July	570	*c* 0	441	3.37	3.88	3.05	C
August	520	456	488	3.73	4.30	1.70	B
September	454	384	417	3.18	3.55	1.45	B
October	380	307	344	2.63	3.03	2.15	B
November	304	259	278	2.12	2.36	2.13	B
December	259	202	230	1.76	2.03	3.14	B
The year	3,120	*c* 0	469	3.58	48.73	34.72	
1909							
January	250	*c* 0	58.8	0.45	0.52	3.50	D
February	*b* 0	*b* 0	*b* 0	0.00	0.00	6.15	
March	433	*c* 0	111	0.85	0.98	2.55	D
April	965	*c* 0	64.9	0.50	0.56	2.15	D
May	1,920	256	944	7.21	8.31	2.87	D
June	334	127	264	2.01	2.24	2.20	D
July	572	53	340	2.60	3.00	2.35	C
August	834	*c* 0	574	4.38	5.05	2.15	C
September	602	404	498	3.81	4.25	2.00	C
October	533	365	442	3.37	3.88	1.80	B
November	384	253	304	2.32	2.59	2.60	C
December	260	179	230	1.76	2.03	1.72	C
The year	1,920	*c* 0	322	2.46	33.41	32.04	
1910							
January	251	*c* 0	140	1.07	1.23	2.74	C
February	367	*c* 0	206	1.57	1.64	5.37	C
March	171	*c* 0	5.5	0.04	0.05	2.20	D
April	*b* 0	*b* 0	*b* 0	0.00	0.00	2.65	
May *a*	215	*c* 0	48.9	0.37	0.43	5.01	D
June *a*	648	215	384	2.93	3.27	3.30	D
July	383	114	279	2.13	2.46	2.90	C
August	630	*c* 0	320	2.44	2.81	5.64	B
September	600	*c* 0	375	2.86	3.19	4.66	B
October	690	0	485	3.70	4.27	2.00	B
November	605	0	191	1.46	1.63	*e*3.17	C
December	572	203	401	3.06	3.53	2.90	C
The year	690	*c* 0	237	1.80	24.51	42.54	
1911							
January	358	0	146	1.11	1.28	1.22	D
February	346	290	319	2.44	2.54	2.50	C
March	380	*c* 0	274	2.09	2.41	2.91	C
April	*b* 0	*b* 0	*b* 0	0.00	0.00	1.12	
May	*b* 0	*b* 0	*b* 0	0.00	0.00	2.57	
June	*b* 0	*b* 0	*b* 0	0.00	0.00	3.89	
July	802	*c* 0	553	4.22	4.86	1.15	C
August	725	342	611	4.66	5.37	2.56	B
September	395	*c* 0	190	1.45	1.62	2.70	C
October	376	*c* 0	42.3	0.32	0.37	3.35	D
November	*b* 0	*b* 0	*b* 0	0.00	0.00	4.40	
December	*b* 0	*b* 0	*b* 0	0.00	0.00	3.95	
The year	802	*c* 0	178	1.36	18.45	32.32	

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a The surface of the reservoir was above the crest of the spillway during the whole or a part of this month. The discharge is computed by using various heights of flash boards which were assumed from a hydrograph study of the lake elevations and records from stations downstream.

b Records show that gates were closed throughout the month; some leakage around the gates and also run-off below the dam but above the cable station give a small discharge at that point.

c Gates closed for one or more days during the month; some discharge at cable station.

d At United States weather bureau station at Indian Lake.

e Estimated.

Monthly Discharge of Indian Lake Reservoir at Indian Lake — (Concluded)

[Drainage area, 131 square miles]

DATE	DISCHARGE IN SECOND-FEET				RUN-OFF	RAINFALL	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	Inches [d]	
1912							
January	658	[c] 0	304	2.32	2.68	1.91	C
February	787	644	743	5.67	6.12	2.32	B
March	638	[c] 0	330	2.52	2.90	2.15	C
April	301	[c] 0	17.7	0.14	0.16	3.20	D
May	1,080	398	723	5.52	6.36	4.40	C
June	618	88	297	2.27	2.53	0.42	C
July	906	347	505	3.86	4.45	1.95	B
August	775	511	686	5.24	6.04	3.88	B
September	607	[c] 0	334	2.55	2.84	4.60	B
October	391	[c] 0	100	0.76	0.88	2.85	C
November	[b] 0	[b] 0	[b] 0	0.00	0.00	4.60	
December	[b] 0	[b] 0	[b] 0	0.00	0.00	[e] 2.00	
The year	1,080	[c] 0	336	2.57	34.96	34.28	
1913							
January	954	[c] 0	230	1.76	2.03	4.79	C
February	734	301	500	3.82	3.98	1.69	D
March	4,730	[c] 0	1,030	7.86	9.06	8.32	D
April	1,870	348	878	6.70	7.48	3.23	C
May	618	60	194	1.48	1.71	3.05	C
June	560	104	323	2.46	2.74	0.48	B
July	852	336	500	3.82	4.40	3.03	A
August	492	424	469	3.58	4.13	1.18	A
September	421	[c] 0	351	2.68	2.99	2.77	A
October	360	[c] 0	212	1.62	1.87	6.28	B
November	[b] 0	[b] 0	[b] 0	0.00	0.00	3.90	
December	452	[c] 0	43.5	0.33	0.38	2.30	B
The year	4,730	[c] 0	393	3.00	40.77	41.02	
1914							
January	454	[c] 0	396	3.03	3.49	3.64	A
February	515	374	417	3.19	3.32	1.90	A
March	334	[c] 0	257	1.96	2.26	2.33	A
April	[b] 0	[b] 0	[b] 0	0.00	0.00	5.51	
May	680	[c] 0	129	0.98	1.13	1.43	D
June	406	16	123	0.94	1.05	2.83	D
July	650	[c] 0	302	2.30	2.65	3.74	C
August	730	321	645	4.92	5.67	4.82	B
September	705	[c] 0	462	3.55	3.96	2.11	C
October	641	422	526	4.02	4.64	1.51	B
November	414	[f] 164	178	1.36	1.52	3.53	C
December	472	[f] 229	75.2	0.574	0.66	2.70	D
The year	730	[c] 0	292.6	2.23	30.35	36.05	

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[a] The surface of the reservoir was above the crest of the spillway during the whole or a part of this month. The discharge is computed by using various heights of flash boards which were assumed from a hydrograph study of the lake elevations and records from stations downstream.

[b] Records show that gates were closed throughout the month; some leakage around the gates and also run-off below the dam but above the cable station give a small discharge at that point.

[c] Gates closed for one or more days during the month; some discharge at cable station.

[d] At United States weather bureau station at Indian Lake.

[e] Estimated.

[f] Gates closed from November 16 to December 17 and from December 23 to 31, inclusive.

HOOSIC RIVER

DESCRIPTION

Hoosic river has its sources on the west slope of the Hoosic mountains in Vermont and Massachusetts. Two head branches, one flowing southward, the other northward along the west slope of this range, unite at North Adams, Mass., and the stream then flows northwestward, entering the Hudson three miles north of Mechanicville. Above Buskirk the drainage basin is rugged and precipitous, the distribution of tributaries affording rapid concentration of the run-off from the steep rock slopes. The ridges are sparsely wooded. The soil in the valleys is generally firm and tenacious. The general elevation of the valley at the junction of the head waters is 1,000 feet. Numerous dams, affording power for textile, agricultural implement and other industries, are scattered throughout the length of the stream from North Adams to Schaghticoke. The drainage basin contains no important lakes and but one storage reservoir, that at Farnum, near the head of the south branch.

The zero discharges indicated on the Schaghticoke and Johnsonville records are due to interference with the flow of the stream by water power users.

HOOSIC RIVER AT SCHAGHTICOKE

The gaging records for this station have been furnished this Department by the Schenectady Power Co., which maintains the station in connection with its hydro-electric plant at Schaghticoke.

Daily Discharge, in Second-feet, of Hoosic River at Schaghticoke

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	127	2,880	509	5,745	2,195	416	196	57	220	20	0	150
2.....	185	2,156	2,200	8,399	1,966	370	127	11	34	20	115	185
3.....	520	665	1,851	5,225	1,768	300	243	89	127	0	115	115
4.....	312	1,936	1,088	2,786	2,775	567	199	0	0	0	127	23
5.....	328	1,844	972	1,900	3,400	740	428	0	104	0	127	150
6.....	601	720	987	2,376	3,465	416	324	79	0	10	162	46
7.....	243	578	900	2,385	2,263	220	451	150	59	10	173	162
8.....	266	428	648	5,500	2,202	324	486	0	127	0	23	173
9.....	254	347	648	7,975	1,387	347	416	0	0	10	162	138
10.....	185	370	462	3,985	1,377	277	385	0	52	59	150	81
11.....	16	11	393	3,047	1,100	196	381	11	52	0	104	11
12.....	150	11	247	2,818	820	277	243	127	17	0	127	0
13.....	0	243	254	1,705	1,115	219	312	46	0	24	127	70
14.....	104	298	660	2,995	1,556	58	185	20	0	17	0	150
15.....	127	150	486	3,025	1,325	220	200	88	23	81	23	92
16.....	70	115	2,638	3,125	1,200	335	312	46	31	70	379	92
17.....	92	347	2,731	3,065	1,028	114	196	0	0	200	382	46
18.....	277	231	1,909	2,977	1,136	231	138	70	92	162	220	70
19.....	173	243	1,007	4,757	986	196	173	185	0	127	254	0
20.....	277	290	800	11,095	855	162	2	46	0	300	58	104
21.....	30	347	763	7,985	846	0	138	266	0	295	46	185
22.....	127	268	400	4,034	613	*a*	147	370	34	150	0	44
23.....	173	324	764	3,207	451	173	91	115	46	100	8	135
24.....	937	92	648	3,007	451	150	204	138	0	200	185	130
25.....	1,284	92	1,390	2,105	617	92	46	115	23	150	185	130
26.....	625	115	3,000	3,746	509	0	0	100	0	0	34	0
27.....	660	173	7,980	3,460	520	92	22	0	0	289	46	42
28.....	1,294	241	7,557	2,105	*a*	92	81	11	30	173	150	65
29.....	1,284	......	8,420	2,356	474	127	34	200	11	69	150	190
30.....	1,146	......	4,945	2,385	254	173	57	243	81	104	243	140
31.....	845	......	3,965	......	220	......	92	335	......	208	......	*a*
Mean...	410	554	1,975	3,976	1,270	232	204	94	39	92	129	97

a No record. NOTE.— Regarding zero discharges, see description of Hoosic river. Discharge stimated for May 28, 497 second-feet; June 22, 86 second-feet; Dec. 31, 100 second-feet.

Monthly Discharge of Hoosic River at Schaghticoke

[Drainage area, 635 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January..........................	1,294	0	410	0.646	0.745
February..........................	2,880	11	554	0.872	0.908
March..........................	8,420	247	1,975	3.110	3.585
April..........................	11,095	1,705	3,976	6.261	6.985
May..........................	3,465	220	1,270	2.000	2.306
June..........................	740	0	232	0.365	0.407
July..........................	486	0	204	0.321	0.370
August..........................	370	0	94	0.148	0.171
September..........................	220	0	39	0.061	0.068
October..........................	300	0	92	0.145	0.167
November..........................	382	0	129	0.203	0.227
December..........................	190	0	97	0.153	0.176
The year..........................	11,095	0	754	1.187	16.115

HOOSIC RIVER AT JOHNSONVILLE

The Schenectady Power Co. maintains gaging records in connection with its hydro-electric plant at Johnsonville and has furnished this Department with the records for this station.

Daily Discharge, in Second-feet, of Hoosic River at Johnsonville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	115	2,300	459	5,171	1,976	375	177	51	200	18	0	135
2	167	1,960	2,000	7,560	42	333	115	10	31	18	104	167
3	468	589	1,666	4,703	1,592	270	219	81	115	0	104	104
4	281	1,760	985	2,508	2,498	511	180	0	0	0	115	21
5	296	1,760	875	1,710	3,060	666	386	0	94	0	115	135
6	541	648	844	2,139	3,119	375	292	72	0	0	146	42
7	219	521	810	2,147	2,037	198	406	135	54	9	156	146
8	240	386	584	4,950	1,982	292	438	0	115	0	21	156
9	229	313	584	8,600	1,249	313	375	0	0	9	146	125
10	167	333	416	3,587	1,240	250	323	0	47	0	135	73
11	15	10	354	2,743	990	177	343	10	47	0	94	10
12	135	10	313	2,537	738	250	219	115	16	0	115	0
13	......	219	229	1,535	1,000	198	281	42	0	22	115	63
14	94	269	596	2,696	1,401	53	167	18	0	16	0	135
15	115	135	486	2,723	1,193	198	180	80	21	73	21	83
16	63	100	2,375	2,813	1,080	302	281	42	28	63	342	83
17	83	313	2,458	2,759	926	103	177	0	0	180	344	42
18	250	208	1,819	2,880	1,023	208	125	63	81	146	198	83
19	156	219	907	4,300	888	177	156	167	0	115	229	0
20	250	261	720	9,986	770	146	2	42	0	270	53	94
21	27	313	687	7,187	762	0	125	240	0	266	42	167
22	115	242	360	3,631	552	*a*	133	333	31	135	0	40
23	156	292	688	2,887	406	156	82	104	42	90	7	122
24	844	83	584	2,707	406	135	184	125	0	180	167	117
25	1,156	83	1,257	1,995	556	23	44	104	21	135	167	113
26	563	104	2,700	2,972	459	0	0	90	0	0	31	0
27	594	156	7,182	3,117	468	83	20	0	0	271	42	38
28	1,185	217	6,802	1,995	*a*	83	73	10	27	156	135	59
29	1,156	......	7,578	2,121	427	115	31	180	10	63	135	171
30	1,032	......	4,451	2,147	229	156	52	219	80	94	219	126
31	761	......	3,569	......	344	......	83	302	......	188	......	*a*
Mean	370	492	1,785	3,627	1,092	207	183	85	35	81	117	88

a No record. NOTE.—Regarding zero discharges, see description of Hoosic river, page 242. Discharge estimated for May 28, as 440 second-feet; June 22, as 76 second-feet; Dec. 31, as 90 second-feet

Monthly Discharge of Hoosic River at Johnsonville

[Drainage area, 609 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	1,185	0	370	0.608	0.701
February	2,300	10	492	0.808	0.841
March	7,578	229	1,785	2.931	3.379
April	9,986	1,535	3,627	5.956	6.645
May	3,060	42	1,093	1.795	2.070
June	666	23	207	0.340	0.379
July	438	0	183	0.300	0.346
August	333	0	85	0.140	0.161
September	200	0	35	0.057	0.064
October	271	0	81	0.133	0.153
November	344	0	117	0.192	0.214
December	171	0	88	0.144	0.166
The year	9,986	0	678	1.113	15.119

HOOSIC RIVER NEAR EAGLE BRIDGE

Location.— One and one-half miles above the village of Eagle Bridge and one-half mile below the mouth of Walloomsac river. Owlkill creek enters the Hoosic at Eagle Bridge. Replaces station formerly maintained at Buskirk (four miles downstream), which was abandoned because the discharge relation was affected by backwater from a newly-constructed dam at Johnsonville.

Records available.—August 13, 1910, to December 31, 1914. For the station formerly maintained at Buskirk, four miles below, records are available from September 25, 1903, to December 31, 1908.

Drainage area.— 512 square miles. (Measured on U. S. Geological Survey topographic sheets.)

Gage.— Sloping staff gage on left bank opposite James Russell's. This gage was installed August 17, 1914, and replaces a standard chain gage supported by cantilever arm on tree on the left bank about 400 feet upstream.

Control.— Gravel; likely to shift.

Discharge measurements.— At low stages made by wading; at high stages made from the cable one-half mile below the gage.

Regulation.— The dam of Walter A. Wood & Co. is located at Hoosick Falls, about two miles above the gage. Walloomsac river is also partly controlled and the effect of the operation of the mills is observable at the gage. For this reason the gage heights should be used with caution.

Accuracy.— Discharge rating curve well defined, so that the accuracy of the estimates depends on the gage heights.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the State Engineer and Surveyor.

Current-meter Discharge Measurements of Hoosic River near Eagle Bridge

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
May 15	R. S. Barnes	10.12	1,640
22	C. S. De Golyer	9.16	790
Aug. 17 [a]	C. S. De Golyer	[b] 7.73	152
Oct. 4 [c]	R. S. Barnes and W. A. James	2.90	79.1

[a] Measurement made by wading 300 feet above the slope gage.
[b] Slope gage reading for this measurement was 3.31 feet.
[c] Measurement made by wading about 100 feet above slope gage.

Daily Gage Height, in Feet, of Hoosic River near Eagle Bridge

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.55	......	......	10.80	11.10	8.55	7.95	7.62	3.65	3.35	2.74	3.41
2	7.90	......	......	......	10.70	8.45	7.95	7.62	3.55	3.31	3.01	3.45
3	8.00	......	......	11.80	10.50	8.40	8.05	7.42	3.52	3.20	3.06	3.54
4	7.50	......	......	10.60	10.40	8.35	7.90	7.48	3.40	2.82	3.16	3.30
5	8.05	......	......	10.20	10.70	9.20	7.98	7.60	3.26	3.15	3.25	3.52
6	8.00	......	......	9.80	10.80	8.85	9.10	7.60	2.99	3.26	3.24	2.95
7	7.70	......	......	9.80	10.60	8.35	8.40	7.45	3.02	3.16	3.00	3.36
8	7.80	......	......	11.30	10.30	8.50	8.70	7.70	3.29	3.02	2.71	3.41
9	7.65	......	......	......	10.10	8.55	8.50	7.45	3.35	3.11	3.30	3.39
10	7.75	......	......	11.80	10.00	8.30	8.80	7.40	3.12	3.02	3.24	3.48
11	7.60	......	......	11.00	10.10	8.25	8.50	7.45	3.32	2.58	3.22	3.21
12	8.20	......	......	11.40	10.00	8.25	8.25	7.65	3.06	2.86	3.30	3.01
13	8.50	......	......	11.00	11.40	8.10	8.40	7.60	2.99	3.24	3.36	2.90
14	8.50	......	......	10.50	10.90	7.60	8.20	7.72	3.10	3.25	2.85	3.48
15	8.40	......	......	10.60	10.60	8.20	8.00	7.72	3.12	3.15	2.92	3.86
16	9.00	......	......	10.60	......	8.35	7.85	7.42	3.22	3.15	3.65	3.76
17	9.00	......	12.70	10.30	......	8.30	7.85	......	3.20	3.15	4.09	3.82
18	......	......	10.30	10.60	......	7.95	8.00	3.34	3.14	3.20	3.50	3.95
19	......	......	9.10	11.40	......	8.00	7.72	3.48	2.98	3.26	3.50	3.89
20	......	......	8.60	......	......	7.80	7.95	3.08	2.90	3.36	3.42	3.62
21	......	......	8.30	......	......	7.60	7.98	3.64	2.88	3.30	3.42	4.16
22	......	......	8.20	12.10	9.10	8.10	7.72	4.05	3.25	3.20	2.98	3.88
23	......	......	8.45	11.60	9.00	8.05	7.72	3.52	3.12	3.18	3.30	3.75
24	......	......	8.25	11.10	8.80	7.85	7.88	3.52	3.01	3.14	3.55	3.78
25	......	......	8.90	10.90	8.85	7.78	7.65	3.52	3.34	2.92	3.36	3.60
26	......	......	11.30	11.40	8.80	7.60	7.48	3.40	2.78	3.01	3.28	......
27	......	......	12.80	11.60	8.70	7.62	7.65	3.42	2.98	3.22	3.34	......
28	......	......	......	11.50	8.70	7.38	7.68	3.28	3.06	3.20	3.55	......
29	......	......	12.50	11.40	8.60	7.90	7.68	3.38	3.38	3.21	3.19	......
30	......	......	11.20	11.90	8.25	8.00	7.65	3.82	3.26	3.20	3.42	......
31	......	......	10.80	......	8.40	......	7.65	3.92	......	3.01	......	......

NOTE.— Discharge relation affected by ice, January 13 to March 16, inclusive. The tree supporting the gage was undermined, causing it to settle some time after the high water of April. Comparison with the flow of the Hoosic at Schaghticoke indicates that this probably took place during the night of April 26. The gage was settling gradually, May 16 to 21, when it fell into the river. Temporary gage used May 22 to August 16, inclusive. Permanent sloping staff gage installed August 18 in different location.

Daily Discharge, in Second-feet, of Hoosic River near Eagle Bridge

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	332	......	......	2,880	2,000	460	215	125	......	......	......	......
2	505	......	......	6,520	1,640	412	215	125	......	......	......	......
3	560	......	......	4,120	1,480	390	248	84	......	......	......	......
4	310	......	......	2,670	1,400	368	200	96	......	......	......	......
5	590	......	......	2,280	1,640	820	224	120	......	......	......	......
6	560	......	......	1,910	1,730	618	760	120	......	......	......	......
7	400	......	......	1,910	1,560	368	390	90	......	......	......	......
8	450	......	......	3,460	1,320	435	535	145	......	......	......	......
9	378	......	......	6,860	1,160	460	435	90	......	......	......	......
10	425	......	......	4,120	1,090	345	590	80	......	......	......	......
11	355	......	......	3,100	1,160	325	435	90	......	......	......	......
12	680	......	......	3,580	1,090	325	325	132	......	......	......	......
13	......	......	......	3,100	2,280	265	390	120	......	......	......	......
14	......	......	......	2,570	1,820	120	305	150	......	......	......	......
15	......	......	......	2,670	1,560	305	230	150	......	......	......	......
16	......	......	......	2,670	......	368	185	84	......	......	......	......
17	......	......	5,530	2,380	......	345	185	152	......	......	......	......
18	......	......	2,380	2,670	......	215	230	......	......	......	......	......
19	......	......	1,310	3,580	......	230	150	......	......	......	......	......
20	......	......	950	6,360	......	170	215	......	......	......	......	......
21	......	......	745	6,520	......	120	224	......	......	......	......	......
22	......	......	680	4,560	760	265	150	......	......	......	......	......
23	......	......	845	3,840	700	248	150	......	......	......	......	......
24	......	......	712	3,220	590	185	194	......	......	......	......	......
25	......	......	1,160	2,990	618	165	132	......	......	......	......	......
26	......	......	3,460	3,580	590	120	96	......	......	......	......	......
27	......	......	5,700	2,470	535	125	132	......	......	......	......	......
28	......	......	6,860	2,380	535	76	140	......	......	......	......	......
29	......	......	5,200	2,280	485	200	140	......	......	......	......	......
30	......	......	3,340	2,780	325	230	132	......	......	......	......	......
31	......	......	2,880	......	390	......	132	......	......	......	......	......

NOTE.— Daily discharge, April 27 to May 15, computed on assumption that gage was reading 1.2 feet high during that period. Daily discharge, January 1 to May 15, determined from well defined rating curve. Daily discharge, May 22 to August 16, based on rating curve that is not well defined. Station shifted August 18 and rating curve for discharges since that date not yet fully developed.

Monthly Discharge of Hoosic River near Eagle Bridge
[Drainage area, 512 square miles]

1914	Discharge in Second-feet				Run-off	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January 1-12	680	310	462	0.902	0.40	.....
March	6,860	....	1,740	3.40	3.92	C
April	6,860	1,910	3,470	6.78	7.57	B
May	2,280	325	1,130	2.21	2.55	B
June	820	76	303	0.592	0.66	B
July	760	96	261	0.510	0.59	B

NOTE.— Mean discharge estimated by comparison with flow at Schaghticoke as follows: March 1-16, 760 second-feet; May 16-21, 1,090 second-feet.

HOOSIC RIVER AT HOOSICK FALLS

Daily Gage Height, in Feet, of Hoosic River at Hoosick Falls

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.50	1.10	1.50	1.45	1.10	0.05	0.10	0.00	—0.05	0.05	0.00	0.10
2	0.35	0.85	1.80	2.65	0.95	0.05	0.10	0.00	—0.05	—0.05	0.00	0.05
3	—0.20	0.80	1.55	1.80	0.95	0.05	0.10	0.00	0.05	0.05	0.00	0.00
4	0.40	0.80	1.30	1.45	0.85	0.10	0.10	0.00	0.05	—0.05	0.00	0.00
5	0.40	0.80	0.90	1.20	0.85	0.15	0.10	0.00	0.05	0.00	0.00	0.00
6	0.25	0.95	0.50	0.95	1.15	0.20	0.20	0.00	0.00	0.00	0.10	0.00
7	0.20	0.80	0.40	0.95	0.80	0.15	0.20	0.00	0.00	—0.05	0.00	0.00
8	0.20	0.70	0.40	1.80	0.55	0.15	0.20	0.00	0.00	0.00	0.10	—0.10
9	0.20	0.65	0.40	3.05	0.50	0.05	0.20	0.00	0.00	0.00	0.05	—0.05
10	0.20	0.60	0.35	1.70	0.45	0.05	0.20	0.00	0.00	0.05	0.00	—0.45
11	0.30	0.25	0.30	1.40	0.45	0.05	0.25	0.00	0.00	0.10	0.00	—0.30
12	0.15	0.10	0.30	1.70	0.45	0.05	0.25	0.00	0.05	0.00	0.00	—0.40
13	0.15	—0.05	0.30	1.35	1.05	0.05	0.20	0.00	0.05	—0.10	0.10	0.00
14	0.15	—0.15	0.30	1.05	0.90	0.10	0.20	0.00	0.00	0.00	0.10	—0.05
15	0.10	—0.15	0.30	1.20	0.65	0.10	0.20	0.00	0.00	0.15	0.10	—0.15
16	0.00	—0.25	0.70	1.10	0.55	0.05	0.10	0.00	0.00	0.05	0.15	—0.15
17	0.00	0.20	2.60	1.15	0.50	0.05	0.10	0.00	0.00	0.00	0.25	—0.25
18	0.20	—0.35	1.40	1.10	0.45	0.05	0.10	0.00	0.00	0.05	0.10	—0.25
19	0.00	—0.35	0.70	1.50	0.45	0.05	0.10	0.05	0.00	—0.05	0.10	—0.30
20	0.00	—0.35	0.60	2.90	0.35	0.00	0.10	0.00	0.05	0.05	0.10	0.00
21	0.10	—0.35	0.60	2.60	0.35	0.00	0.10	0.00	0.00	0.05	0.10	—0.10
22	0.10	0.20	0.60	1.60	0.25	0.00	0.10	0.00	0.00	—0.05	0.10	—0.15
23	0.10	—0.40	0.55	1.50	0.25	0.00	0.10	—0.10	0.05	—0.05	0.10	—0.25
24	0.30	—0.40	0.50	1.30	0.20	—0.10	0.10	0.00	0.00	0.15	0.05	—0.30
25	1.15	—0.40	0.70	1.10	0.15	—0.40	0.10	0.00	0.05	0.10	0.05	0.00
26	0.70	—0.40	1.95	1.25	0.15	—0.70	0.10	0.05	0.00	0.05	0.10	0.00
27	0.60	—0.40	2.30	1.20	0.05	—0.05	0.10	0.00	0.00	0.00	0.10	0.00
28	0.80	—0.40	3.35	1.20	0.05	0.05	0.00	—0.05	0.00	0.00	0.10	—0.25
29	1.05	......	2.00	1.10	0.05	0.05	0.05	0.05	0.00	0.00	0.10	—0.20
30	1.25	......	1.50	1.20	0.10	0.10	0.10	0.00	0.00	0.00	0.10	—0.30
31	1.15	......	1.60	......	0.10	......	0.00	0.00	......	0.05	......	—0.30

SACANDAGA RIVER

DESCRIPTION

Sacandaga river is one of the larger tributaries of the upper Hudson. It drains extensive portions of the southeast slope of the Adirondack region as well as a portion of the plateau lying north of Mohawk river and south of the Adirondack mountains. The headwaters of the stream rise in the slopes surrounding Lake Pleasant, Sacandaga and Piseco lakes. It is formed by three principal branches, which unite in the southeastern part of Hamilton county. The west branch is the outlet at Piseco lake, the middle branch is the outlet of Sacandaga and Pleasant lakes, the east and principal branch issues from a series of small ponds and lakes in the southwestern part of Warren county. Sacandaga lake, the highest of the tributary lakes in the headwaters, is about 1,700 feet above mean tide. The east and middle branches unite a few miles north of Wells and are joined by the west branch a short distance below Wells. The river then flows southeasterly to a point about five miles below Northville. Above Northville the drainage basin is rugged and almost completely forest-covered. From Northville to Conklingville the stream winds through a sandy valley flanked by steep slopes. The width of this valley averages about one mile from Northampton to Conklingville. Above Northampton is an extensive flat lying at elevation of about 740 feet. This flat is drained by Mayville, Vly and Hann's creeks and contains extensive swamp areas. From Northville to Conklingville, a distance along the general course of the stream of about 22 miles, there is very little fall. The elevation at Conklingville is about 720 feet. Sacandaga river enters Hudson river at Luzerne at elevation about 540 feet. Between Northville and the mouth of the river there is a fall of about 180 feet (chiefly concentrated in the five miles below Conklingville) entirely unutilized. There are, in fact, no power developments on the Sacandaga.

The drainage area of this river, about 1,060 square miles, is largely in forest. The mean precipitation is high, being about 49 inches, whereas the mean for the whole Hudson drainage area above Mechanicville is only about 43 inches.

SACANDAGA RIVER AT HADLEY

Location.— About half a mile west of the railroad station at Hadley, 1 mile above the confluence of Sacandaga river with the Hudson and 4½ miles below the site of the proposed storage dam at Conklingville. No tributaries between this station and the mouth of the river.

Records available.— September 13, 1907, to December 31, 1914.

Drainage area.— 1,060 square miles. (Measured on U. S. G. S. topographic sheets.)

Gage.— Recording hydrograph gage 30 feet downstream from the cable, in a concrete well 3 feet square, inside dimension. The well is connected with the river by a 4-inch cast-iron water pipe. There is a hook gage in the well to assist in setting the automatic gage and an auxiliary sloping staff gage is located outside.

Control.— Very rough, but permanent.

Discharge measurements.— Made from the cable at medium and high stages and by wading about three-fourths mile upstream at low stages. The channel at the cable has been cleared of bowlders.

Winter flow.— The water in the well and in the intake pipe never freezes over because its level is below the frost line. The discharge relation is, however, considerably affected by ice.

Accuracy.— The discharge rating curve that has been developed for this station is well defined.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Sacandaga River at Hadley

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Jan. 12[a]	C. S. De Golyer	3.93	566
17[a]	C. S. De Golyer	4.44	547
28[b]	C. S. De Golyer	4.28	659
Feb. 2[a]	R. S. Barnes	4.59	1,130
24[c]	R. S. Barnes	4.72	736
Mar. 11[c]	R. S. Barnes	4.19	686
Oct. 8	C. S. De Golyer	2.64	200
Dec. 26[d]	C. S. De Golyer and F. M. De Golyer	5.18	484

[a] Measurement made from lower bridge 1,500 feet below gage.
[b] Measurement made through ice one-half mile above gage.
[c] Measurement made through ice 200 feet above gage.
[d] Measurement made through ice one-third mile above gage.

Daily Gage Height, in Feet, of Sacandaga River at Hadley

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	4.55	4.55	3.65	6.65	7.70	3.65	3.12	2.60	4.32	2.72	2.97	4.08
2.....	4.85	4.55	4.40	6.90	7.50	3.55	2.95	2.63	4.02	2.70	2.97	4.12
3.....	4.80	4.55	4.75	7.10	7.20	3.46	2.98	2.61	3.88	2.69	2.97	4.65
4.....	4.55	4.41	4.38	7.40	6.75	3.47	3.00	2.59	3.91	2.68	2.96	4.90
5.....	4.35	4.55	4.18	7.40	6.55	3.63	3.00	2.55	3.80	2.67	2.96	4.65
6.....	4.43	4.70	4.08	6.90	6.45	3.75	2.98	2.54	3.61	2.62	2.96	4.38
7.....	4.30	4.45	4.05	6.45	6.35	3.64	3.03	2.50	3.48	2.65	2.97	3.9
8.....	4.14	4.48	4.01	6.45	6.15	3.56	3.43	2.48	3.42	2.62	2.99	3.9
9.....	4.05	4.50	3.98	7.20	5.90	3.57	3.55	2.48	3.35	2.59	3.02	3.8
10.....	3.99	4.45	3.98	7.90	5.75	3.59	3.41	2.46	3.23	2.58	3.03	3.84
11.....	3.95	4.50	3.95	7.90	5.55	3.50	3.33	2.45	3.15	2.58	3.03	3.71
12.....	3.91	4.55	3.88	7.60	5.40	3.38	3.39	2.43	3.08	2.59	3.03	3.50
13.....	3.95	4.50	3.85	7.30	5.55	3.28	3.40	2.44	3.01	2.60	3.02	3.87
14.....	4.26	4.55	3.82	7.10	5.70	3.21	3.32	2.45	2.97	2.60	3.03	3.26
15.....	4.50	......	3.75	6.95	5.75	3.15	3.20	2.46	2.93	2.60	3.09	3.78
16.....	4.60	......	3.90	6.95	5.65	3.10	3.10	2.46	2.84	2.61	3.83	4.60
17.....	4.38	......	4.20	6.95	5.45	3.07	3.08	2.48	2.83	2.65	5.15	4.95
18.....	4.40	5.45	4.35	7.00	5.20	3.02	3.03	2.47	2.82	2.72	4.90	5.00
19.....	4.55	5.20	4.38	7.50	4.95	2.97	3.01	2.49	2.79	2.91	4.18	4.95
20.....	4.38	4.90	4.50	8.60	4.70	2.95	2.97	2.53	2.77	3.20	3.78	4.80
21.....	4.30	4.85	4.55	9.90	4.45	2.94	2.91	2.71	2.75	3.42	3.85	4.80
22.....	4.35	4.75	4.36	10.00	4.35	2.95	2.86	2.95	2.73	3.36	3.92	4.85
23.....	4.44	4.65	4.32	9.30	4.25	2.95	2.84	3.15	2.71	3.26	3.86	4.95
24.....	4.32	4.55	4.24	8.60	4.15	2.92	2.84	3.08	2.70	3.21	3.73	5.00
25.....	4.25	4.48	4.15	8.00	4.02	2.83	2.84	2.92	2.69	3.16	3.66	5.00
26.....	4.65	4.25	4.18	7.70	3.98	2.75	2.83	2.86	2.70	3.11	3.65	5.15
27.....	4.65	3.85	4.65	7.60	4.03	2.78	2.79	2.83	2.71	3.02	3.75	......
28.....	4.29	3.70	5.55	7.60	3.91	2.78	2.75	2.80	2.72	3.00	4.10	......
29.....	4.13	......	6.10	7.60	3.82	2.80	2.70	3.14	2.74	2.99	4.36	5.10
30.....	4.19	......	6.35	7.70	3.75	2.83	2.69	4.55	2.73	2.98	4.23	4.85
31.....	4.26	......	6.50	......	3.78	......	2.63	4.75	......	2.98	......	......

NOTE.— Discharge relation affected by ice, January 1 to March 31 and December 15 to 31' Inclusive.

Daily Discharge, in Second-feet, of Sacandaga River at Hadley

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	778	1,060	552	6,260	9,500	821	436	176	1,530	227	350	1,250
2.....	698	1,090	1,220	6,980	8,820	738	339	189	1,180	218	350	1,290
3.....	864	1,110	1,630	7,580	7,880	668	355	180	1,040	214	350	1,980
4.....	864	956	1,220	8,500	6,540	675	366	172	1,060	210	344	2,370
5.....	910	1,110	1,010	8,500	5,980	804	366	157	956	205	344	1,980
6.....	1,010	1,060	864	6,980	5,720	910	355	153	787	184	344	1,600
7.....	864	1,010	738	5,720	5,460	812	383	138	683	197	350	1,080
8.....	738	1,060	660	5,720	4,960	746	645	131	637	184	361	1,060
9.....	660	1,060	587	7,880	4,360	754	738	131	587	172	378	1,010
10.....	622	1,010	552	10,200	4,020	770	630	124	506	168	383	996
11.....	587	......	519	10,200	3,580	698	573	121	455	168	383	873
12.....	552	......	486	9,160	3,270	608	615	114	412	172	383	698
13.....	552	......	455	8,180	3,580	539	622	118	372	176	378	601
14.....	587	......	424	7,580	3,900	493	566	121	349	176	383	526
15.....	587	......	395	7,130	4,020	455	486	124	328	176	418	......
16.....	660	......	486	7,130	3,790	424	424	124	283	180	986	......
17.....	519	......	698	7,130	3,370	407	412	131	277	197	2,800	......
18.....	519	......	821	7,280	2,890	378	383	128	272	227	2,370	......
19.....	622	......	864	8,820	2,460	350	372	135	258	317	1,360	......
20.....	519	......	956	12,900	2,050	339	350	149	250	486	938	......
21.....	455	......	1,010	19,000	1,700	334	317	222	240	637	1,010	......
22.....	486	......	821	19,500	1,570	339	292	339	232	594	1,080	......
23.....	552	......	778	16,000	1,440	339	283	455	222	526	1,020	......
24.....	552	622	738	12,900	1,330	323	283	412	218	493	892	......
25.....	587	622	660	10,600	1,180	278	283	323	214	461	830	......
26.....	910	587	698	9,500	1,140	240	278	292	218	430	821	......
27.....	956	552	956	9,160	1,190	254	258	278	222	378	910	......
28.....	660	552	1,630	9,160	1,070	254	240	263	227	366	1,270	......
29.....	552	......	2,710	9,160	976	263	218	449	236	361	1,580	......
30.....	587	......	3,900	9,500	910	278	214	1,830	232	355	1,420	......
31.....	622	......	5,330	......	938	......	189	2,130	......	355	......	......
Mean...	666	839	1,110	9,480	3,540	510	396	316	482	297	826	794

NOTE.— Daily discharge values during the frozen periods, January 1 to February 10 and February 24 to March 31, are only approximate. Daily discharge determined from well-defined rating urve. Estimated mean daily discharge, December 15 to 31, 429 second-feet.

Monthly Discharge of Sacandaga River at Hadley
[Drainage area, 1,060 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January	....	....	666	0.628	0.72	B
February	....	....	839	0.792	0.82	C
March	....	....	1,110	1.05	1.21	B
April	19,500	5,720	9,480	8.94	9.97	A
May	9,500	910	3,540	3.34	3.85	A
June	910	240	510	0.481	0.54	A
July	738	189	396	0.374	0.43	A
August	2,130	114	316	0.298	0.34	A
September	1,530	214	482	0.455	0.51	A
October	637	168	297	0.280	0.32	A
November	2,800	244	826	0.779	0.87	A
December	2,370	....	794	0.749	0.86	C
The year	19,500	114	1,598	1.51	20.44	

SACANDAGA RIVER NEAR HOPE

Location.—About 3½ miles above the post-office at Hope, 4 miles below the village of Wells, 12 miles above Northville (the nearest railroad station) and 1½ miles below the junction of the east and west branches of the Sacandaga.

Records available.— September 15, 1911, to December 31, 1914.

Drainage area.— 494 square miles. (Measured on U. S. Geological Survey topographic sheets.)

Gage.— Staff in two sections; a sloping staff reading from 1.0 to 4.3 feet; a vertical staff graduated above 4.3 attached to a rocky cliff in line with the sloping gage.

Control.— Regular and permanent.

Discharge measurements.— Made from a cable with a span of 214 feet during high stages and by wading at low stages.

Winter flow.— Discharge relation affected by ice. Gage observations suspended during winter.

Accuracy.— The open-water rating curve is very well defined and estimates for this period are good.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Sacandaga River near Hope

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Sept. 28 *a*......	C. S. De Golyer..................................	1.78	137
30 *b*......	C. S. De Golyer..................................	1.74	122

a Measurement made by wading at regular section.
b Measurement made by wading 300 feet below gage.

Daily Gage Height, in Feet, of Sacandaga River near Hope

1914	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.4	5.90	2.50	1.85	1.66	2.70	1.70	1.70	3.05
2	5.2	5.60	2.42	1.82	1.65	2.60	1.70	1.70	3.60
3	......	4.90	2.35	1.95	1.60	2.90	1.68	1.70	3.80
4	4.4	4.90	2.50	1.88	1.59	2.75	1.65	1.70	3.50
5	4.4	4.80	2.65	1.80	1.45	2.55	1.65	1.80	3.20
6	4.0	4.60	2.48	2.08	1.40	2.45	1.62	1.82	3.20
7	3.9	4.60	2.40	2.18	1.40	2.50	1.60	1.80	2.95
8	5.1	4.10	2.50	2.50	1.42	2.42	1.60	1.80	2.90
9	6.4	4.20	2.48	2.48	1.45	2.25	1.60	1.80	2.70
10	5.4	4.30	2.34	2.38	1.45	2.18	1.60	1.80	2.70
11	5.0	4.20	2.26	2.38	1.50	2.12	1.60	1.80	2.60
12	4.9	4.40	2.22	2.55	1.52	2.05	1.60	1.90	2.38
13	4.6	4.20	2.12	2.38	1.45	2.00	1.60	1.92	2.45
14	4.6	4.40	2.09	2.20	1.50	1.95	1.58	2.15	2.48
15	4.8	4.30	1.99	2.15	1.55	1.88	1.55	2.50	2.40
16	4.9	4.20	1.96	2.12	1.53	1.85	1.55	4.30	2.50
17	5.0	3.80	2.02	2.08	1.50	1.88	1.70	3.80	2.60
18	5.8	3.40	1.88	2.10	1.51	1.85	1.88	3.15	2.60
19	7.1	3.60	1.85	2.02	1.55	1.78	2.15	3.20	3.00
20	8.3	3.15	1.92	1.94	1.62	1.75	2.20	3.10	3.10
21	7.6	3.15	1.86	1.90	2.12	1.75	2.15	2.95	3.45
22	6.6	3.00	1.80	1.92	2.21	1.72	2.02	2.80	......
23	6.4	3.00	1.76	1.88	1.96	1.70	1.92	2.65	......
24	5.8	2.90	1.68	1.90	1.90	1.72	1.85	2.50	......
25	5.6	3.10	1.70	1.86	1.88	1.80	1.82	2.60	......
26	6.1	3.00	1.65	1.82	1.80	1.80	1.80	2.60	......
27	6.1	2.80	1.62	1.78	1.70	1.80	1.80	3.20	......
28	6.1	2.75	1.60	1.74	1.80	1.79	1.80	3.40	......
29	6.4	2.70	2.00	1.70	3.30	1.75	1.79	3.10	......
30	6.3	2.85	1.90	1.70	3.70	1.72	1.76	2.95	......
31	......	2.60	......	1.70	3.00	......	1.72	......	......

NOTE.— Discharge relation affected by ice, January 1 to March 31 and December 16 to 31, inclusive.

Daily Discharge, in Second-feet, of Sacandaga River near Hope

1914	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2,560	6,070	456	160	101	590	112	112	865
2	4,230	5,250	411	150	98	520	112	112	1,400
3	3,400	3,540	374	197	85	740	107	112	1,650
4	2,560	3,540	456	171	83	625	98	112	1,290
5	2,560	3,330	555	143	53	488	98	143	1,000
6	1,920	2,930	445	248	45	428	90	150	1,000
7	1,780	2,930	400	291	45	456	85	143	780
8	3,990	2,070	456	456	48	411	85	143	740
9	7,530	2,230	445	445	53	324	85	143	590
10	4,730	2,390	369	390	53	291	85	143	590
11	3,760	2,230	329	390	63	265	85	143	520
12	1,920	2,560	310	488	67	236	85	178	390
13	2,930	2,230	265	390	53	216	85	186	428
14	2,930	2,560	252	300	63	197	81	278	445
15	3,330	2,390	212	278	73	171	74	456	400
16	3,540	2,230	201	265	69	160	74	2,390	......
17	3,760	1,650	224	248	63	171	112	1,650	......
18	5,790	1,190	171	256	65	160	171	955	......
19	9,900	1,400	160	224	73	137	278	1,000	......
20	15,000	955	186	90	90	127	300	910	......
21	11,800	955	164	178	265	127	278	780	......
22	8,160	820	143	186	305	118	224	660	......
23	7,530	820	130	171	201	122	186	555	......
24	5,790	740	106	178	178	118	160	456	......
25	5,250	910	112	164	171	143	150	520	......
26	6,640	820	98	150	143	143	143	520	......
27	6,640	660	90	137	112	143	143	1,000	......
28	6,640	625	85	124	143	140	143	1,190	......
29	7,530	590	216	112	1,090	127	140	910	......
30	7,230	700	178	112	1,520	118	131	780	......
31	......	520	......	112	820	......	118	......	......
Mean	5,380	1,990	267	236	203	267	133	561	539

NOTE.— Daily discharge determined from a well-defined rating curve. New rating curve used, beginning April 1, 1914.

Monthly Discharge of Sacandaga River near Hope
[Drainage area, 494 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
April	15,000	1,780	5,380	10.9	12.16	B
May	6,070	520	1,990	4.03	4.65	A
June	555	85	267	0.540	0.60	A
July	488	112	236	0.478	0.55	A
August	1,520	45	203	0.411	0.47	B
September	740	112	267	0.540	0.60	A
October	300	74	133	0.269	0.31	A
November	2,390	112	561	1.14	1.27	B
December	165	....	539	1.09	1.26	C

NOTE.— Estimated mean daily discharge, December 16 to 31, 290 second-feet.

WEST BRANCH OF SACANDAGA RIVER AT BLACKBRIDGE, NEAR WELLS

Location.—At the highway bridge known as Blackbridge, about 3 miles west of Wells and 2 miles above the junction of the east and west branches of Sacandaga river.

Records available.— March 14, 1911, to December 31, 1914.

Drainage area.— 211 square miles. (Measured on U. S. Geological Survey topographic sheets.)

Gage.— Chain, attached to upstream side of the highway bridge; read twice daily; datum unchanged.

Control.— Rocky and rough.

Discharge measurements.— Made from the bridge or by wading.

Regulation.— Gage heights slightly affected by storage dams used for logging in the spring.

Winter flow.— Discharge relation affected by ice. Gage observations suspended during the frozen period.

Measurements made during 1914 indicate a shift in the control of this station. Sufficient data for computing estimates of discharge are not available at this time.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of West Branch of Sacandaga River at Blackbridge, near Wells

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Sept, 29 a	C. S. De Golyer	2.80	60.8
29 a	C. S. De Golyer	2.79	57.1
Oct. 14	R. S. Barnes	2.52	42.8
Dec. 4	C. S. De Golyer	4.75	689

a Measurement made by wading at regular section.

Daily Gage Height, in Feet, of West Branch of Sacandaga River at Blackbridge, near Wells

1914	Jan.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.90	5.15	6.80	3.32	2.88	2.55	3.80	2.65	2.75	4.22
2	4.30	5.45	6.00	3.30	2.92	2.62	3.90	2.62	2.75	4.70
3	4.70	6.20	6.20	3.25	2.90	2.58	4.30	2.60	2.70	4.92
4	4.55	6.00	5.40	3.40	2.72	2.52	4.30	2.62	2.75	4.82
5	4.20	5.60	6.00	3.60	2.82	2.52	4.25	2.60	2.85	4.62
6	4.20	5.35	5.60	3.50	3.22	2.55	4.00	2.58	3.00	4.38
7	4.30	5.10	5.35	3.40	3.50	2.45	3.80	2.50	2.92	4.20
8	4.30	6.50	5.15	3.60	3.70	2.45	3.70	2.52	2.95	4.12
9	4.10	7.20	5.05	3.60	3.60	2.45	3.50	2.50	2.95	4.00
10	3.90	5.80	5.15	3.45	3.60	2.40	3.42	2.50	2.80	3.70
11	......	5.10	5.15	3.32	3.70	2.40	3.32	2.55	2.90	3.72
12	......	6.20	5.40	3.30	3.55	2.50	3.25	2.52	2.90	3.60
13	......	5.80	5.90	3.20	3.50	2.45	3.20	2.45	2.90	3.60
14	......	5.70	5.45	3.10	3.32	2.45	3.20	2.45	3.45	3.52
15	......	5.80	5.30	3.12	3.32	2.55	3.50	2.45	3.35	3.32
16	......	5.80	5.30	3.00	3.05	2.60	3.00	2.50	4.95	3.48
17	......	5.90	5.00	2.90	3.05	2.60	2.95	2.80	5.10	3.40
18	......	6.20	4.75	2.90	3.22	2.60	2.95	2.30	4.50	3.30
19	......	7.50	4.55	2.90	3.12	2.55	2.80	3.45	4.40	*a*
20	......	9.10	4.40	2.95	3.00	2.52	2.85	3.45	4.50	*a*
21	......	8.40	4.20	2.90	2.72	3.42	2.82	3.35	4.00	*a*
22	......	7.90	4.10	2.82	2.60	3.45	2.75	3.30	4.15	*a*
23	......	7.20	4.00	2.80	2.62	3.12	2.85	3.12	4.00	*a*
24	......	7.00	3.90	2.80	2.92	3.15	2.85	3.00	3.92	*a*
25	......	7.20	3.80	2.72	2.65	3.12	2.90	2.95	3.82	*a*
26	......	7.00	3.75	2.70	3.15	2.90	2.80	2.90	3.82	*a*
27	......	7.20	3.70	2.65	3.55	2.82	2.82	2.85	4.15	*a*
28	......	7.00	3.70	2.68	3.02	2.95	2.90	2.80	4.30	*a*
29	......	7.30	3.60	2.52	2.75	4.80	2.85	2.75	4.10	*a*
30	......	7.20	3.48	2.32	2.70	4.20	2.70	2.80	4.12	*a*
31	......	......	3.40	......	2.68	4.00	......	2.85	......	*a*

NOTE.— Discharge relation affected by ice, January 1 to March 31 and December 19 to 31, inclusive.
a No record.

SCHROON RIVER

DESCRIPTION

Schroon river rises in Essex county, along the southern slopes of the highest mountains in the Adirondack group, flows in a general southerly direction for about forty-five miles through Essex and Warren counties and joins the Hudson near Thurman. Its total drainage area is 550 square miles. Its head-waters reach an elevation of about 2,000 feet above mean tide; its mouth is at an elevation of about 600 feet.

Its basin is largely forested and contains considerable wild land and numerous lakes and ponds. The most important of these is Schroon lake, through which the river flows, which has a water-surface area of about 6.3 square miles. The only power plants are at Warrensburg.

SCHROON RIVER AT RIVERBANK

Location.— At the highway bridge 12 miles above the confluence of Schroon river with the Hudson, 9 miles below the mouth of Schoon lake, about 3½ miles below the outlet of Brant lake and 1 mile below the foot of Tumblehead falls. The station is about 9 miles north of Warrensburg, where there are several dams used for power development.

Records available.— September 2, 1907, to December 31, 1914.

Drainage area.— 534 square miles.

Gage.— Chain; read twice daily; datum unchanged.

Control.— Gravel; not permanent.

Discharge measurements.— Made from the bridge.

Regulation.— Since 1907 the regimen of flow of Schroon river, from the law-water period to the high, has been somewhat affected by storage in Schroon lake. In September, 1907, a timber crib dam was constructed at Starbuckville about 6 miles above the station. This dam affords a head of about 8 feet and ponds water to Schroon lake.

Winter flow.— Backwater from ice fluctuates rapidly and estimates for this period are approximate.

Accuracy.— Open-water curve fairly well developed. Gage heights are sometimes affected by backwater from log jams. Records as published are good.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Schroon River at Riverbank

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Jan. 1 *a*	C. S. De Golyer	2.50	347
14 *a*	C. S. De Golyer	2.88	349
27 *a*	C. S. De Golyer	2.41	297
Feb. 4 *a*	R. S. Barnes	2.15	320
17 *b*	W. S. Easterly	2.40	278
Mar. 10 *b*	R. S. Barnes	2.35	294
31 *c*	O. W. Hartwell	3.49	908
April 22	W. S. Easterly	9.18	7,290
May 5	C. S. De Golyer	5.78	3,440
5	C. S. De Golyer	5.76	3,360
Sept. 15	E. D. Burchard	1.89	280
Oct. 9	C. S. De Golyer	1.63	184

a Backwater from ice.
b Backwater from ice. Measurement made through ice under bridge.
c Backwater from log jam.

Daily Gage Height, in Feet, of Schroon River at Riverbank

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.35	1.80	2.30	3.90	6.80	3.10	2.20	1.47	1.55	1.80	1.30	1.90
2	2.90	2.10	2.50	4.40	6.70	2.35	2.25	1.50	1.55	1.70	1.42	1.95
3	2.85	2.10	2.50	4.70	6.30	2.30	2.30	1.55	1.60	1.70	1.39	2.15
4	2.50	2.05	2.50	4.70	6.00	2.30	1.55	1.50	1.55	1.60	1.40	2.15
5	2.40	2.10	2.45	4.80	5.80	2.70	1.60	1.50	1.55	1.65	1.38	2.20
6	2.50	2.05	2.50	4.70	5.60	2.30	1.55	1.50	1.65	1.65	1.44	2.05
7	2.50	2.10	2.45	4.60	5.40	2.30	1.60	1.48	1.55	1.60	1.35	2.10
8	2.30	2.10	2.50	4.80	5.10	2.35	1.60	1.48	1.50	1.65	1.39	2.15
9	2.35	2.60	2.50	5.40	4.90	2.75	1.55	1.45	1.65	1.65	1.38	2.15
10	2.30	2.30	2.30	5.70	4.70	2.40	1.55	1.46	1.75	1.65	1.35	2.10
11	2.85	2.15	2.25	6.00	4.20	2.90	1.50	1.44	1.85	1.55	1.36	2.05
12	2.80	2.40	2.30	6.00	3.90	3.00	1.50	1.45	1.90	1.60	1.35	2.05
13	2.85	2.30	2.30	5.90	4.00	2.85	1.60	1.46	1.75	1.55	1.42	2.05
14	3.00	2.20	2.25	5.70	4.00	2.45	1.60	1.45	1.85	1.55	1.42	2.00
15	2.90	2.00	2.20	5.70	4.10	3.10	1.55	1.45	1.85	1.50	1.65	2.35
16	2.40	2.20	2.10	5.70	4.10	3.20	1.60	1.40	1.85	1.55	1.70	2.40
17	2.50	2.50	2.00	5.80	4.00	2.60	1.60	1.43	1.90	1.50	1.70	2.30
18	2.80	2.40	2.10	5.90	4.00	2.55	1.60	1.41	1.85	1.50	1.70	2.30
19	2.70	2.30	2.10	6.30	4.00	2.35	1.55	1.44	1.85	1.55	1.70	2.10
20	2.60	2.20	2.10	7.50	3.40	2.30	1.55	1.46	1.80	1.60	1.75	......
21	2.60	2.20	2.20	9.10	3.10	1.55	1.55	1.50	1.85	1.55	1.90	......
22	2.70	2.35	2.05	9.20	3.60	2.35	1.55	1.48	1.85	1.50	1.70	......
23	2.60	2.10	2.10	8.60	3.20	2.35	1.55	1.50	1.80	1.55	1.90	......
24	2.45	2.30	2.15	8.00	3.20	2.25	1.55	1.48	1.75	1.55	2.00	......
25	2.40	2.20	2.10	7.60	3.10	2.35	1.60	1.44	1.80	1.46	1.70	......
26	2.50	2.30	2.15	7.10	3.10	2.25	1.50	1.45	1.80	1.55	1.70	......
27	2.50	2.30	2.25	7.00	3.10	1.40	1.60	1.46	1.80	1.47	1.80	......
28	2.40	2.30	2.65	6.90	3.30	1.65	1.55	1.39	1.75	1.49	1.80	......
29	2.35	......	2.85	6.80	2.90	2.15	1.50	1.55	1.70	1.45	1.90	......
30	2.30	......	3.20	6.90	2.65	2.05	1.50	1.50	1.70	1.46	1.85	......
31	2.00	......	3.60	......	2.65	......	1.50	1.60	......	1.46	......	......

NOTE.— Discharge relation affected by ice, January 1 to 31 and February 2 to March 15, by log jams, March 31 and April 20 to 25, and by ice, November 21 to 24 and December 15 to 31, inclusive.

Daily Discharge, in Second-feet, of Schroon River at Riverbank

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	347	230	......	1,380	4,940	810	370	138	159	230	99	262
2	495	......	......	1,850	4,790	430	390	146	159	200	126	279
3	468	......	......	2,170	4,200	410	410	159	172	200	119	351
4	430	......	......	2,170	3,780	410	159	146	159	172	121	351
5	410	......	......	2,280	3,510	590	172	146	159	186	117	370
6	394	......	......	2,170	3,250	410	159	146	186	186	131	314
7	378	......	......	2,060	3,000	410	172	141	159	172	110	332
8	378	......	......	2,280	2,640	430	172	141	146	186	119	351
9	382	......	......	3,000	2,400	615	159	134	186	186	117	351
10	370	......	......	3,380	2,170	450	159	136	215	186	110	332
11	362	......	......	3,780	1,660	695	146	131	246	159	112	314
12	355	......	......	3,780	1,380	750	146	134	262	172	110	314
13	351	......	......	3,640	1,470	668	172	136	215	159	126	314
14	349	......	......	3,380	1,470	472	172	134	246	159	126	296
15	347	......	......	3,380	1,560	810	159	134	246	146	186	......
16	......	......	332	3,380	1,560	870	172	121	246	159	200	......
17	......	......	296	3,510	1,470	540	172	128	262	146	200	......
18	......	......	332	3,640	1,470	518	172	124	246	146	200	......
19	......	......	332	4,200	1,470	430	159	131	246	159	200	......
20	......	......	332	5,420	1,000	410	159	136	230	172	215	......
21	......	......	370	7,050	810	159	159	146	246	159	215	......
22	......	......	312	7,250	1,140	430	159	141	246	146	200	......
23	......	......	332	6,660	870	430	159	146	230	159	230	......
24	......	......	351	6,110	870	390	159	141	215	159	215	......
25	......	......	332	5,760	810	430	172	131	230	136	200	......
26	......	......	351	5,420	810	390	146	134	230	159	200	......
27	......	......	390	5,260	810	121	172	136	230	138	230	......
28	......	......	565	5,100	935	186	159	119	215	144	230	......
29	......	......	668	4,940	695	351	146	159	200	134	262	......
30	......	......	723	5,100	565	314	146	146	200	136	246	......
31	......	......	935	......	565	......	146	172	......	136	......	......
Mean	334	282	873	3,980	1,870	478	183	139	213	164	169	276

NOTE.— Daily discharge values January 1 to 15, April 20 to 25 and November 21 to 24, are approximate. See note following table of daily gage height. Daily discharge determined from a fairly well-defined rating curve.

Monthly Discharge of Schroon River at Riverbank
[Drainage area, 534 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January	495	....	334	0.626	0.72	B
February	....	....	282	0.528	0.55	C
March	935	....	373	0.699	0.80	B
April	7,250	1,380	3,980	7.45	8.31	A
May	4,020	565	1,870	3.51	4.05	A
June	870	121	478	0.895	1.00	A
July	410	146	183	0.343	0.40	B
August	172	119	139	0.261	0.30	B
September	262	146	213	0.399	0.44	B
October	230	136	164	0.307	0.35	B
November	262	99	169	0.317	0.35	B
December	370	....	276	0.517	0.60	C
The year	7,250	99	703	1.32	17.87	

NOTE.— See "Regulation" in the station description. Mean discharge estimated for the following periods: January 16 to 31, 284 second-feet; March 1 to 15, 308 second-feet; December 15 to 31, 236 second-feet.

PRECIPITATION RECORDS, UPPER HUDSON BASIN

Rain gages have been maintained by the United States Weather Bureau in coöperation with this Department at several places on the Upper Hudson drainage area. Precipitation records have been kept as follows:

Daily Precipitation, in Inches, at Troy

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1			1.20				0.02			0.01		
2		0.30		0.32			0.35				0.12	
3				0.08			0.70	0.08	0.20			0.04
4						0.70						
5					0.52	0.02						
6					0.61		0.05					
7		0.04	0.30	0.10			1.00					
8				0.20		0.28	0.39		0.01			0.03
9				0.78							0.37	
10	0.05											
11					0.28			0.45			0.02	
12					0.10			0.60				
13					1.20							
14		1.25			0.02		0.17					0.32
15	0.05	0.55						0.10				
16	0.04	0.10		0.15		0.22				0.31	0.20	
17	0.28	0.10	0.10	0.05				0.10		0.20		
18			0.14									
19	0.04	0.26	0.17				0.05	0.13		0.25		
20	0.04			1.10		0.20		0.15		0.04	0.82	
21	0.49			0.77	0.77			0.92			0.07	0.85
22	0.06						0.22	0.08				
23							0.05					
24	0.08		0.08				0.31	0.03	0.30			
25									0.32			
26	0.32											
27	0.07			0.65	0.25					0.01		
28			0.85	0.01				0.14				
29				0.04		0.51		0.38				
30			0.12	0.75		0.07			0.22	0.04		0.05
31	0.06		0.07					0.65				
Total	1.58	2.60	3.03	5.00	2.98	2.00	3.31	3.81	1.05	0.86	1.60	1.29
Year												29.11

Daily Precipation, in Inches, at Mechanicville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1			0.96	0.70			0.33					
2				0.09			0.30	0.40			0.04	
3						0.33			0.13			0.02
4					0.28	0.15						
5					0.49							
6							0.36					
7				0.38		0.20	0.45		0.02			
8				1.25								
9											0.35	
10												
11						0.68	2.32					
12					1.01			0.47			0.05	
13												
14		T									0.14	0.45
15		0.32						0.95				
16										0.25	0.58	
17										0.43		
18			0.47					0.05		0.03		
19				0.48				0.06		0.51		
20	0.15			0.75						0.09	0.63	
21							0.09	0.76			0.10	0.52
22					0.05		0.03	0.81				0.30
23							0.28		0.45			
24	0.75								0.26			
25				0.51				0.07				
26				0.17								
27			0.94			0.14			0.07			
28			0.08			1.48		0.24				
29			0.30	0.66				0.39				0.04
30				0.03	0.30			0.19		0.16		
31	1.00							0.04				
Total...	1.90	0.32	2.75	5.02	2.13	2.98	4.16	4.43	0.93	1.47	1.89	1.33
Year...												29.31

T means trace

Daily Precipitation, in Inches, at Hoosick Falls

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1		0.51	0.11		0.10	0.04						0.01
2	T		1.42	1.15			0.40	0.10			0.09	0.01
3				0.15			0.28		0.16		0.02	0.06
4		0.08				0.28						
5				0.02	0.31	0.34						
6					0.08		0.76				0.01	
7			0.50	0.04					0.05			
8	T			0.35		0.07	0.26					T
9	0.02			1.05							0.49	
10	0.10					0.04						
11					0.04							
12				0.19	0.03		0.40	0.49			0.15	
13					0.81	T						
14		0.55			0.06						0.10	0.33
15		0.67						0.75				
16	0.06			0.17		0.54				0.13	0.38	
17			0.19	0.05		0.04		0.04		0.60	0.02	
18		0.06					0.41	0.11		0.13	T	
19			0.22							0.21	0.12	
20	0.02	0.23		0.75		0.39		0.14			0.02	0.31
21	0.43	0.09		0.71				0.54			0.04	0.09
22	0.08						0.47	0.88			0.01	0.12
23			0.03		0.03						0.02	
24	0.63		T				0.31		0.25			
25								0.05	0.21			0.11
26				0.45								
27	0.06		0.02	0.31					0.02	0.07		
28			0.85		0.06			0.50		T		
29			0.08	0.03		0.31	0.07	0.38				
30				0.65	0.06	0.12		0.07	0.30	0.13		0.18
31	0.04		0.25		0.02			0.60		T		0.03
Total...	1.44	2.19	3.67	6.07	1.60	2.17	3.36	4.65	0.99	1.30	1.47	1.25
Year...												30.16

T means trace.

Daily Precipitation, in Inches, at Glens Falls

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1			1.60	0.88								
2			0.05	0.04			0.72	0.32	0.07			0.07
3		0.05					0.02	0.10	0.50			
4		0.07			0.27	0.84						
5				0.02	0.12		0.05					
6												
7		0.34	0.50			0.10	0.90		0.02			
8	0.11			1.97								
9	0.09										0.15	
10												
11				0.12			0.07	0.19				
12	0.04				0.81			0.06			0.05	
13					0.03							
14		1.57									0.10	1.26
15	0.06							0.45				
16		0.15		0.40				0.10			0.93	
17							0.12			0.35		
18			0.45					0.12		0.14	0.02	
19		0.10				0.15				0.04		0.16
20				1.15						0.34		
21	0.56						0.30	1.46			1.14	0.96
22		0.03			0.07			0.10				
23							0.29					
24	0.44											0.16
25			0.05		0.04			0.03	0.71			
26	0.14			0.72								
27						0.03			0.07	T		
28			0.65				0.21	0.90				
29						0.36		0.72				
30				0.95				1.30	0.05	0.06		0.26
31	1.11				1.30			0.02				
Total	2.66	2.31	3.30	6.25	1.34	1.48	2.68	5.87	1.42	0.93	2.39	2.87
Year												33.50

T means trace.

Daily Precipitation, in Inches, at Corinth

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1							0.40					0.06
2		0.83	0.96	0.83			0.32		0.07			0.05
3				0.06				0.08	0.35			
4		0.22		0.10		0.45						
5					0.21	0.31						
6							0.70					
7		0.35					0.50					
8			0.36	0.70		0.18	0.16					
9				1.23			1.23				0.18	
10												
11											0.02	
12				0.24			0.20	0.12			0.05	
13	0.30				0.95							
14		0.40			0.06						0.11	1.20
15		1.27						0.23				
16				0.20							1.15	
17	0.18			0.10						0.66		
18							0.20			0.10		
19			0.48				0.20			0.05		
20	0.05			0.38		0.11				0.35	0.90	0.58
21	0.50			0.67				1.30			0.15	0.32
2												0.70
23												
24		0.24					0.30	0.02	0.15			
25	0.48								0.43			
26				0.68								
27			0.08	0.31					0.16			
28				0.16		0.05		0.68				
29			0.05	0.05		0.42		1.20	0.16			
30	0.08		0.40	0.83		0.06	0.08	1.65				0.46
31												
Total	1.59	3.31	2.33	6.54	1.22	1.58	4.29	5.28	1.32	1.16	2.56	3.37
Year												34.55

Daily Precipitation, in Inches, at Northville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1		1.05	0.30	0.83			0.58					
2												0.18
3		0.14						0.06	0.42			
4		0.03			0.28	0.78						
5					0.12		0.40					
6		0.24		0.10			0.12				0.13	
7			0.29	0.95		0.38	1.01		0.23			
8	0.12			1.16				0.09				0.29
9											0.09	
10												
11	0.20			0.30				0.15		0.11	0.04	
12					0.92						0.08	
13					0.14						0.05	
14		1.06									0.15	0.72
15	0.10							0.30				
16	0.30	0.10		0.25							1.52	
17							0.18			0.68		
18			0.28					0.13		0.13	0.03	
19				0.41		0.56		0.10		0.72		
20	0.52			0.60				0.08			0.80	
21							0.13	1.24				0.66
22		0.13			0.13			0.26				0.35
23							0.33				0.15	0.40
24	0.26								0.08			
25			0.20	0.51					0.53			
26			0.20									0.24
27			0.47				0.10		0.12			
28	0.14		0.18			0.52	0.20	0.50				
29								0.70				
30			0.37	0.77				1.57	0.08	0.05		0.42
31												
Total	1.64	2.75	2.29	5.88	1.59	2.24	3.05	5.18	1.46	1.69	3.04	3.26
Year												34.07

MOHAWK RIVER DRAINAGE BASIN

DESCRIPTION

Mohawk river, the largest tributary of the Hudson, rises in the sandy hills south of Boonville, in western New York, about 40 miles from the east end of Lake Ontario. Its uppermost tributaries are fed by large springs. The river receives also considerable water brought in from the adjacent Black river drainage basin for the supply of Black river and Erie canals. The Mohawk flows southward until it reaches the city of Rome, at which point it turns toward the east, flowing across the state in a course nearly east until it enters the Hudson at Cohoes, a few miles above Troy. Its total length is about 140 miles and its drainage area comprises 3,486 square miles.

The immediate valley of the Mohawk is broad and open, at many places a mile or two in width, and the flats which border the stream have a rich alluvial soil, finely adapted to the raising of grass, grains and broom corn. Back of the flats there is a rise, in most places gradual but locally abrupt, to hills which attain altitudes several hundred feet above the stream. The more elevated lands are covered with sandy and gravelly loam. Toward the mouth of the river the valley becomes contracted and the meadows disappear.

Above Rome the Mohawk flows through a deep gorge in shale rock. From Rome eastward to Little Falls the valley is deeply filled with alluvial deposits and the flood plains on either side become submerged during freshets, thus acting to some extent as storage reservoirs. At Little Falls the river cuts through a rocky gorge, whose walls rise precipitously 500 or 600 feet.

Below Rome the river has a small and rather uniform fall and is characterized by long, quiet reaches with slight riffles, but at Little Falls this uniformity is broken and the stream descends in a succession of falls about 45 feet in half a mile. The average fall between Rome and the lower aqueduct at Crescent, a distance of 110.7 miles, is 2.43 feet per mile; thence to the level of slack water above Troy dam there is a farther descent of 149.5 feet in 4.4 miles, but of this 105 feet is included within the improved power at Cohoes.

The Erie canal runs parallel to the Mohawk through most of its course below Rome and derives a part of its water-supply from the river. Feeder dams for purposes of diversion are located on the river at Delta, Rome, Little Falls, Rocky Rift and Rexford. A dam at Oriskany creek also diverts into the canal a portion of the flow of that tributary, as well as waters brought into the Mohawk basin from storage reservoirs located in the upper drainage basin of Chenango river near Hamilton, N. Y. There is also a diversion dam near the mouth of Schoharie creek, the largest tributary of the Mohawk.

The new Barge canal, now nearing completion by the State of New York, will utilize by canalization the greater portion of the river between Albany and Utica. The water-supply for the Rome summit level of the new canal will to a large extent come from the Mohawk. A high dam has been constructed across the Mohawk at Delta, 6 miles north of Rome, for the purpose of creating a reservoir to store water for the canal. The capacity is 2,750,000,000 cubic feet. This supply will be supplemented by a reservoir of 3,445,000,000 cubic feet capacity on West Canada creek at Hinckley. Hinckley water will be passed down West Canada creek and diverted by a new dam on the site of the old Morgan dam at Trenton Falls through a feeder canal to Nine-Mile creek and thence to the Barge canal.

The principal tributaries of the Mohawk below the source are, successively, Oriskany, West Canada, East Canada and Schoharie creeks.

Drainage Areas of Mohawk River and Tributaries
(From U. S. G. S. topographic maps)

LIMITS	AREA IN SQUARE MILES			
	Place to place	Sub-total	Branch total	Total
Lansingkill				
Source to junction with West branch	29.41	....	29.41	....
Mohawk River				
Source of West branch to junction with East branch	19.25	19.25	....	....
Source of East branch to junction with West branch	15.16	34.41	....	....
Junction of East and West branches to and including first large creek to north	5.86	40.27	....	....
First creek below junction to and including second large creek to north	6.08	46.35	....	....
Second creek below junction to junction of Lansingkill, Hillside	3.40	49.75	49.75	79.16
Junction at Hillside to mouth of Stringer brook	1.17	....	....	80.33
Stringer Brook				
Source to mouth	13.43	....	13.43	93.76
Mohawk River				
Junction of Stringer brook to mouth of Big brook (Frenchville)	3.02	....	....	96.78
Big Brook				
Source to mouth	22.86	....	22.86	119.64
Mohawk River				
Junction of Big brook (Frenchville) to State feeder dam at Delta	16.25	....	....	135.89
State feeder dam at Delta to highway bridge below new Delta dam	11.97	....	....	147.86
Highway bridge below new Delta dam to Ridge Mills dam	7.74	....	....	155.60
Ridge Mills dam to Floyd Ave. bridge	2.59	....	....	158.19
Floyd Ave. bridge to State dam at Rome	2.55	....	....	160.74
State dam at Rome to mouth of Six-Mile creek	26.40	....	....	187.14
Six-Mile Creek				
Source to mouth	14.94	....	14.94	202.08
Mohawk River				
Mouth of Six-Mile creek to mouth of Nine-Mile creek	5.29	....	....	207.37
Nine-Mile Creek				
Source to South Trenton	19.62	....	....	....
South Trenton to crossing of 500-foot contour	6.54	26.16	....	....
Crossing of 500-foot contour to first bridge above Holland Patent	2.49	28.65	....	....
First bridge above Holland Patent to first bridge below Holland Patent	12.71	41.36	....	....
First bridge below Holland Patent to Stittville	6.12	47.48	....	....
Stittville to first bridge below Stittville (Powell's bridge)	11.59	59.07	....	....
Powell's bridge to third bridge below Stittville	10.34	69.41	....	....
Third bridge below Stittville to mouth	0.79	70.20	70.20	277.57
Mohawk River				
Mouth of Nine-Mile creek to mouth of Oriskany creek	6.19	....	....	283.76
*Areas diverted from Chenango river basin**				
Chenango river from source to junction with Eaton brook at Eaton	25.25	....	....	25.25
Eaton brook from source to Eaton reservoir dam	9.16	9.16	....	....
Eaton reservoir dam to junction with Chenango river at Eaton	6.69	15.85	15.85	41.10
Chenango river, junction Eaton brook to head of feeder canal	2.99	....	....	44.09

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* Not included in totals for Mohawk river areas.

Drainage Areas of Mohawk River and Tributaries — (Continued)
(From U. S. G. S. topographic maps)

LIMITS	AREA IN SQUARE MILES			
	Place to place	Sub-total	Branch total	Total
Areas diverted from Chenango river basin — (Con.)				
Bradley brook from source to Bradley reservoir dam	3.04	....	....	....
Bradley reservoir dam to head of feeder canal	4.57	7.61	....	....
Kingsley brook from source to Kingsley reservoir dam	5.12	....	....	....
Kingsley reservoir dam to junction with Bradley brook feeder canal	1.75	6.87	14.48	58.57
Head of feeder, Chenango river to junction of feeders, Woodman pond	2.04	....	....	60.61
Payne brook from source to Madison reservoir dam	8.73	....	....	....
Madison reservoir dam to junction of feeders, Woodman pond	2.04	10.77	10.77	71.38
Junction of feeders, Woodman pond to junction with Leland pond outlet	3.26	....	....	74.64
Source, Leland creek to canal reservoir dam	6.74	....	....	81.38
Junction with Leland pond outlet to natural watershed limits	6.53	....	....	87.91
Oriskany Creek				
Source of Oriskany creek to bridge at Solsville	7.84	....	....	....
Solsville to Oriskany Mills	13.27	21.11	....	....
Oriskany Mills to junction with Big creek (Deansboro)	16.54	37.65	....	....
Source of Big creek to junction with Oriskany creek (Deansboro)	20.32	57.97	....	....
Junction with Big creek to Farmers Mills	14.09	72.06	....	....
Farmers Mills to Clinton	11.11	83.17	....	....
Clinton to Kirkland	4.73	87.90	....	....
Kirkland to dam above Clark Mills	5.76	93.66	....	....
Dam above Clark Mills to Walesville	9.92	103.58	....	....
Walesville to Colemans	36.99	140.57	....	....
Colemans to State dam above Oriskany	5.47	146.04	....	....
State dam above Oriskany to mouth of Oriskany creek	0.78	146.82	146.82	430.58
MOHAWK RIVER				
Mouth of Oriskany creek to mouth of Sauquoit creek	15.68	....	....	446.26
Sauquoit Creek				
Source of Sauquoit creek to Cassville	7.17	....	....	....
Cassville to dam at Clayville	4.71	11.88	....	....
Dam at Clayville to dam at Sauquoit	12.54	24.42	....	....
Dam at Sauquoit to dam above Chadwick	4.28	28.70	....	....
Dam above Chadwick to 700-foot contour at Willowvale	3.72	32.42	....	....
700-foot contour at Willowvale to dam at Washington Mills	11.37	43.79	....	....
Dam at Washington Mills to dam above New Hartford	2.92	46.71	....	....
Dam above New Hartford to dam at Capron	1.52	48.23	....	....
Dam at Capron to dam below Capron	2.20	50.43	....	....
Dam below Capron to upper dam at New York Mills	0.49	50.92	....	....
Upper dam at New York Mills to mouth of Sauquoit creek	14.58	65.50	65.50	511.76
MOHAWK RIVER				
Mouth of Sauquoit creek to Black River R. R. bridge at Utica	13.09	....	....	524.85
Black River R. R. bridge at Utica to mouth of Reels creek	2.70	....	....	527.55
Reels Creek				
Source to mouth	9.69	....	9.69	537.24
Ballou Creek				
Source to mouth	4.57	....	4.57	541.81

Drainage Areas of Mohawk River and Tributaries — (Continued)
(From U. S. G. S. topographic maps)

LIMITS	AREA IN SQUARE MILES			
	Place to place	Sub-total	Branch total	Total
MOHAWK RIVER				
Mouth of Ballou creek to mouth of Starch Factory creek	1.99			543.80
Starch Factory Creek				
Source to mouth	7.22			551.02
MOHAWK RIVER				
Mouth of Starch Factory creek to mouth of Sterling creek	30.93			581.95
Sterling Creek				
Source to mouth	19.94			601.89
MOHAWK RIVER				
Mouth of Sterling creek to mouth of Moyer creek.	14.85			616.74
Moyer Creek				
Source to mouth	21.66			638.40
MOHAWK RIVER				
Mouth of Moyer creek to mouth of Steels creek	7.30			645.70
Steels Creek				
Source to mouth	29.54			675.24
MOHAWK RIVER				
Mouth of Steels creek to Mohawk-Herkimer road bridge	33.07			708.31
Mohawk-Herkimer road bridge to mouth of West Canada creek	7.51			715.82
West Canada Creek *				
Source to mouth	583.64			1,299.46
MOHAWK RIVER				
Mouth of West Canada creek to State dam at Little Falls	26.07			1,325.53
State dam at Little Falls to Gilberts dam	4.20			1,329.73
Gilberts dam to Rocky Rift feeder dam	11.82			1,341.55
Crum Creek				
Source to mouth	11.40			1,352.95
MOHAWK RIVER				
Mouth of Crum creek (feeder dam) to mouth of Nowadaga creek	0.27			1,353.22
Nowadaga Creek				
Source to mouth	32.43			1,385.65
MOHAWK RIVER				
Mouth of Nowadaga creek to mouth of East Canada creek	4.65			1,390.30
East Canada Creek *				
Source to mouth	281.61			1,671.91
MOHAWK RIVER				
Mouth of East Canada creek to mouth of East Crum creek	0.59			1,672.50
East Crum Creek				
Source to mouth	15.55			1,688.05
MOHAWK RIVER				
Mouth of East Crum creek to mouth of Timmerman creek	3.31			1,691.36

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* For subareas, see separate table following.

Drainage Areas of Mohawk River and Tributaries — (Continued)
(From U. S. G. S. topographic maps)

LIMITS	AREA IN SQUARE MILES			
	Place to place	Sub-total	Branch total	Total
Timmerman Creek				
Source to mouth	16.38	....	....	1,707.74
MOHAWK RIVER				
Mouth of Timmerman creek to mouth of Zimmerman creek	0.52	....	....	1,708.26
Zimmerman Creek				
Source to mouth	14.63	....	....	1,722.89
MOHAWK RIVER				
Mouth of Zimmerman creek to St. Johnsville bridge	0.54	....	....	1,723.43
St. Johnsville bridge to mouth of Garoga creek	12.05	....	....	1,735.48
Garoga Creek				
Source of Garoga creek to foot of East Garoga lake	10.44	....	....	....
Foot of East Garoga lake to foot of pond, Newkirk Mills	3.18	13.62	....	....
Foot of pond, Newkirk Mills, to junction with Peck lake outlet	9.11	22.73	22.73	....
Source of Woodworth lake to foot of Peck lake	16.29	....	....	....
Foot of Peck lake to junction with Garoga creek	4.52	20.81	43.54	....
Junction with Peck lake outlet to Rockwood	7.20	....	50.74	....
Rockwood to Garoga	2.19	....	52.93	....
Garoga to mouth of Sprite creek	4.99	....	57.92	....
Source of Sprite creek to mouth	14.13	....	72.05	....
Mouth of Sprite creek to fourth highway bridge above mouth	13.19	....	85.24	....
Fourth highway bridge above mouth to second highway bridge above mouth	7.78	....	93.02	....
Second highway bridge above mouth to first highway bridge above mouth	1.17	....	94.19	....
First highway bridge above mouth to mouth of Garoga creek	0.51	....	94.70	1,830.18
MOHAWK RIVER				
Mouth of Garoga creek to Fort Plain	12.70	....	....	1,842.88
Fort Plain to Canajoharie	67.92	....	....	1,910.80
Canajoharie Creek				
Source to mouth	69.22	....	69.22	1,980.02
MOHAWK RIVER				
Canajoharie to Sprakers	9.94	....	....	1,989.96
Flat Creek				
Source to mouth	49.11	....	49.11	2,039.07
MOHAWK RIVER				
Sprakers to mouth of Yatesville creek	17.56	....	....	2,056.63
Yatesville Creek				
Source to mouth	12.71	....	12.71	2,069.34
MOHAWK RIVER				
Mouth of Yatesville creek to mouth of Cayadutta creek	24.48	....	....	2,093.82
Cayadutta Creek				
Source of Cayadutta creek to Johnstown (Main street bridge)	35.16	....	....	....
Johnstown (Main street bridge) to dam above Sammonsville	2.84	38.00	....	....
Dam above Sammonsville to dam at Sammonsville	3.53	41.53	....	....
Dam at Sammonsville to dam two miles below Sammonsville	16.44	57.97	....	....
Dam below Sammonsville to mouth of Cayadutta creek	5.06	63.03	63.03	2,156.85

Drainage Areas of Mohawk River and Tributaries — (Concluded)
(From U. S. G. S. topographic maps)

LIMITS	AREA IN SQUARE MILES			
	Place to place	Sub-total	Branch total	Total
MOHAWK RIVER				
Mouth of Cayadutta creek to Fultonville bridge	0.68	....	....	2,157.53
Fultonville bridge to mouth of Schoharie creek	47.39	....	....	2,204.92
*Schoharie Creek**				
Source to mouth	909.30	....	....	3,114.22
MOHAWK RIVER				
Mouth of Schoharie creek to mouth of Chuctanunda creek (Amsterdam)	31.54	....	....	3,145.76
South Chuctanunda Creek				
Source to Minaville	22.62	22.62	....	....
Minaville to mouth	10.41	33.03	33.03	3,178.79
North Chuctanunda Creek				
Source to dam, Amsterdam reservoir	8.76	8.76	....	....
Dam, Amsterdam reservoir, to Hagaman	20.77	29.53	....	....
Hagaman to Rockton	4.11	33.64	....	....
Rockton to mouth	5.58	39.22	39.22	3,218.01
MOHAWK RIVER				
Amsterdam to Hoffman Ferry	43.59	....	....	3,261.60
Hoffman Ferry to Scotia bridge	52.44	....	....	3,314.04
Scotia bridge to mouth of Alplaus kill	24.37	....	....	3,338.41
Alplaus Kill				
Source to mouth	55.80	....	55.80	3,394.21
MOHAWK RIVER				
Mouth of Alplaus kill to Rexford Flats dam	1.23	....	....	3,395.44
Rexford Flats dam to Vischer's Ferry dam	10.98	....	....	3,406.42
Vischer's Ferry dam to Dunsbach Ferry dam	53.20	....	....	3,459.62
Dunsbach Ferry dam to Crescent aqueduct	10.25	....	....	3,469.87
Crescent aqueduct to Crescent dam	2.68	....	....	3,472.55
Crescent dam to Cohoes Co.'s dam	0.61	....	....	3,473.16
Cohoes Co.'s dam to mouth of Mohawk river	12.68	....	....	3,485.84

* For subareas, see table following.

Drainage Area of Schoharie Creek
(From U. S. G. S. topographic maps)

LOCATION	DISTANCE IN MILES †			Elevation	FALL IN FEET		DRAINAGE AREA IN SQUARE MILES	
	From mouth	From Prattsville	Place to place		Place to place	Per mile	Point to point ‡	Total
Reservoir site	64.0	0.0	......	1,240	......	....	228.0	228.0
Prattsville gage	62.5	1.5	1.5	1,160	80	53.3	10.4	238.4
Devasego Falls	60.5	3.5	2.0	1,100	60	30.0	8.1	240.5
Gilboa	55.5	8.5	5.0	1,000	100	20.0	58.5	305.0
North Blenheim	48.5	15.5	7.0	800	200	22.3	92.9	397.9
Breakabeen	43.0	21.0	5.5	710	90	16.4	23.8	421.7
Middleburg	35.0	29.0	8.0	620	90	11.2	105.7	527.4
Schoharie	29.5	34.5	5.5	590	30	5.5	26.6	554.0
Mouth of Fox creek	28.0	36.0	1.5	585	5	3.3	90.5	644.5
Above Cobleskill creek	24.0	40.0	4.0	580	5	1.2	12.8	657.3
Mouth of Cobleskill	24.0	46.0	0.0	580	0	....	135.9	793.2
Esperance	18.0	46.0	6.0	560	20	3.3	63.2	856.4
Burtonville	14.5	49.5	3.5	520	40	11.4	14.0	870.4
Mill Point bridge	6.0	58.0	8.5	340	180	21.1	30.3	900.7
Mouth (Ft. Hunter)	0.0	64.0	6.0	280	60	7.5	8.6	909.3

† Measured along general course of stream. ‡ From head.

Drainage Areas of East Canada Creek
(From U. S. G. S. Topographic Maps)

LIMITS	AREA IN SQUARE MILES			
	Place to place	Sub-total	Branch total	Total
EAST CANADA CREEK				
Above Oregon	40.13	....	....	40.13
Oregon to junction with North creek	10.42	....	....	50.55
North Creek				
Source to junction with East Canada creek	18.60	....	18.60	69.15
EAST CANADA CREEK				
Junction with North creek to junction with Trammel creek	8.63	....	....	77.78
Trammel Creek				
Source to junction with East Canada creek	12.04	....	....	89.82
EAST CANADA CREEK				
Junction with Trammel creek to junction with Ayers creek (Stratford)	0.20	....	....	90.02
Ayers Creek				
Source to junction with East Canada creek	13.63	....	....	103.65
EAST CANADA CREEK				
Junction with Ayers creek (Stratford) to Emmonsburg	8.05	....	....	111.70
Emmonsburg to junction with Big Sprite creek	15.68	....	....	127.38
Big Sprite Creek				
Source to Stewart landing	40.90	....	....	....
Stewart landing to junction with East Canada creek	7.87	....	48.77	176.15
EAST CANADA CREEK				
Junction with Big Sprite creek to junction with Middle Sprite creek	3.70	....	....	179.85
Middle Sprite Creek				
Source to junction with East Canada creek	22.65	....	....	202.50
EAST CANADA CREEK				
Junction with Middle Sprite creek to junction with Spruce creek	0.20	....	....	202.70
Spruce Creek				
Source to dam at Diamond Hill	36.20	36.20	....	....
Dam at Diamond Hill to Salisbury	13.08	49.28	....	....
Salisbury to junction with East Canada creek	1.20	....	50.48	252.98
EAST CANADA CREEK				
Junction with Spruce creek to lower bridge, Dolgeville	0.60	....	....	253.48
Lower bridge, Dolgeville, to High Falls	3.64	....	....	257.22
High Falls to junction with Gillett creek	0.84	....	....	258.06
Gillett Creek				
Source to junction with East Canada creek	10.92	....	....	268.98
EAST CANADA CREEK				
Junction with Gillett creek to Ingham Mills	8.73	....	....	277.71
Ingham Mills to Beardslee Falls	3.60	....	....	281.31
Beardslee falls to mouth	0.30	....	....	281.61

Drainage Area of West Canada Creek
(From U. S. G. S. topographic maps)

DIVISIONS OF AREA	AREA IN SQUARE MILES		
	Place to place	Sub-total	Total
West Canada creek lakes, source to outlet of Mud lake	18.05	......	18.05
West Canada creek, foot of lakes to Swanson dam	28.77	......	46.82
West Canada creek, Swanson dam to ½ mile below Metcalf brook	46.82	......	93.04
Honnedaga lake, above outlet	5.40	5.40	....
Honnedaga brook, foot of lake to mouth	11.90	17.30	....
Honnedaga lake and brook, total, source to mouth	......	17.30	110.94
West Canada creek, Honnedaga lake outlet to junction with south branch (Nobleboro)	30.46	......	141.40
South branch, West Canada creek, above Mountain House (Remonda)	34.40	34.40	....
South branch, West Canada creek, Mountain House to mouth at Nobleboro	19.25	53.65	....
South branch, West Canada creek, total, source to mouth	......	53.65	....
West Canada creek, total to Nobleboro, including south branch	......	......	195.05
West Canada creek, Nobleboro (junction N. and S. branches) to Wilmurt	2.58	......	....
West Canada creek, total above bridge at Wilmurt	......	......	197.63
Four-mile brook, total, source to mouth	......	26.17	....
West Canada creek, total at Wilmurt, including Four-mile brook	......	......	223.80
West Canada creek, Wilmurt to mouth of Black creek	36.92	......	....
West Canada creek, total to mouth of Black creek	......	......	260.72
Black creek, source through Hall Vly	8.40	8.40	....
Black creek, Hall Vly to Bennett's mill (first bridge above Gray)	16.30	24.70	....
Black creek, Bennett's mill to Gray	4.50	29.20	....
Black creek, Gray to first bridge below Gray	3.00	32.20	....
Mill creek, source through Cranberry lake and swamp	11.00	......	....
Mill creek, foot of Cranberry lake to junction N. Branch	6.20	17.20	....
Mill creek, total, source to mouth	......	17.20	....
North branch, Black creek, above contour 1,520 (Bull Hill road)	6.80	......	....
North branch, Black creek, Bull Hill road to junction, Mill creek	4.00	10.80	....
North branch, Black creek, junction, Mill creek, to mouth	0.85	11.65	....
North branch, Black creek, total to junction with Black creek	......	20.85	....
Black creek, total to first bridge below Gray	......	61.05	....
Black creek, first bridge below Gray to Mounts creek	0.17	61.22	....
Mounts creek, above Gray-Wilmurt road (Radley)	13.25	......	....
Mounts creek, Radley to mouth	2.10	......	....
Mounts creek, total, source to mouth	......	15.35	....
Black creek, mouth of Mounts creek to second bridge below Gray	1.55	......	....
Black creek, total to second bridge below Gray	......	78.12	....
Black creek, second bridge below Gray to third bridge	5.65	83.77	....
Black creek, third bridge below Gray to fourth bridge	12.35	96.12	....
Black creek, fourth bridge below Gray to fifth bridge (Pardeville)	4.00	100.12	....
Black creek, Pardeville to Grant	1.95	102.07	....
Black creek, Grant to mouth	1.15	103.22	....
Black creek, total, source to mouth	......	103.22	....
West Canada creek, total to mouth of and including Black creek	......	......	363.94
West Canada creek, mouth of Black creek to Twin Rock bridge	0.50	......	....
West Canada creek, total to Twin Rock bridge	......	......	364.44
West Canada creek, Twin Rock bridge to Hinckley dam	8.50	......	372.94
West Canada creek, Hinckley dam to Prospect	2.00	......	374.94
West Canada creek, Prospect to Trenton Falls	0.90	......	375.84
West Canada creek, Trenton Falls to Steuben creek	6.20	......	382.04
Steuben creek, total, source to mouth	52.30	......	434.34
West Canada creek, Steuben creek to Poland (first bridge below)	35.80	......	470.14
West Canada creek, Poland to Newport	10.00	......	480.14
West Canada creek, Newport to Middleville	47.20	......	527.34
West Canada creek, Middleville to Kast bridge	47.50	......	574.84
West Canada creek, Kast bridge to mouth	8.80	......	583.64
West Canada creek, total, source to mouth	......	......	583.64

Table showing Drainage Areas used previous to 1910 *in estimating Run-off of Mohawk River and Tributaries at certain Gaging Stations; together with latest determination of these Areas from U. S. Geological Survey Topographic Maps*

STREAM	Gaging station	DRAINAGE AREAS IN SQUARE MILES	
		Formerly used	From U. S. G. S. maps
Mohawk river	Cohoes dam	3,456	3,473.2
	Dunsbach Ferry	3,440	3,459.6
	Rexford Flats	3,385	3,395.4
	Schenectady, Freemans bridge	3,321	
	Scotia bridge		3,314.0
	Amsterdam		3,218.0
	Tribes Hill		3,114.2
	Fonda-Fultonville		2,157.5
	Fort Plain		1,842.9
	Rocky Rift dam	1,351	1,341.6
	Little Falls	1,306	1,329.7
	Herkimer		708.3
	Utica, Black River R. R. bridge	500	524.8
	Rome, State dam	148 (1906)	160.0
	Floyd Ave. bridge		158.2
	Ridge Mills	152.5 (U. S. D. W.)	155.6
Schoharie creek	Fort Hunter	947	909.3
	Schoharie Falls	930	
	Middleburg		527.4
	Prattsville	243	238.4
Cayadutta creek	Near Johnstown	40	41.5
Garoga creek	Near Fort Plain	80.8	
East Canada creek	Dolgeville	256	257.2
West Canada creek	Kast Bridge	574 (1903)	574.8
	Poland		470.1
	Middleville	519 (U. S. D. W.)	527.3
	Trenton Falls	375	375.8
	Twin Rock bridge	364	364.4
Sauquoit creek	New York Mills	51.5	50.9
Oriskany creek	State feeder dam	144	146.0
Nine-Mile creek	Stittville, Powell's bridge	62.6	59.1

MOHAWK RIVER WATER-SURFACE RECORDS

The following tables give records of the daily elevation of water-surface of the Mohawk river at different gaging stations for 1914. These tables are arranged in order proceeding upstream from the junction of the Mohawk river with the Hudson river at Waterford to Delta.

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River at Waterford

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	15.85	17.70	15.85	21.30	20.40	14.45	15.30	15.25	14.95	15.15	15.25	16.20
2.....	15.95	17.45	15.90	22.20	19.40	14.40	15.45	15.25	14.50	15.10	15.15	16.30
3.....	15.90	16.85	16.20	22.30	18.55	14.15	16.00	15.15	14.55	15.10	14.85	16.40
4.....	15.85	16.75	16.35	20.30	17.85	14.20	15.60	15.15	14.55	15.35	14.85	16.65
5.....	15.70	16.70	16.20	19.40	17.60	14.00	15.40	15.15	14.60	15.25	14.85	16.50
6.....	15.60	16.60	16.00	18.70	18.25	14.00	15.45	15.20	14.75	15.05	14.90	16.35
7.....	15.55	16.60	15.95	18.05	18.25	14.20	15.50	15.15	14.80	15.15	15.00	16.30
8.....	15.45	16.35	15.75	18.05	17.75	14.35	15.55	15.25	14.70	15.25	14.95	16.10
9.....	15.50	16.15	16.00	24.00	17.20	14.40	15.60	15.20	15.10	15.00	15.20	15.95
10.....	15.45	16.05	15.85	22.30	16.65	14.55	15.60	15.15	15.10	15.15	15.05	15.95
11.....	15.60	15.75	15.90	20.95	16.50	14.70	15.60	15.15	15.05	15.40	14.85	15.80
12.....	15.55	15.70	15.80	20.25	16.00	15.45	15.80	15.25	15.15	15.20	15.00	15.75
13.....	15.65	15.80	15.95	20.25	17.45	15.45	15.70	15.20	14.85	15.05	15.05	15.55
14.....	15.65	15.85	15.90	19.15	17.70	15.30	15.55	15.15	15.40	15.10	15.05	15.50
15.....	15.70	15.85	15.95	18.75	17.10	15.30	15.50	15.20	14.95	15.00	15.50	15.25
16.....	15.55	15.90	16.00	18.85	16.40	15.20	15.50	15.30	15.20	14.95	15.50	15.25
17.....	15.55	15.80	16.60	19.10	15.95	15.20	15.45	15.15	14.95	15.05	15.45	15.40
18.....	15.60	15.95	17.75	19.10	15.75	15.10	15.45	15.00	15.20	15.30	16.40	15.35
19.....	15.55	15.90	17.20	19.45	15.35	15.05	15.35	15.20	15.15	15.20	16.35	15.45
20.....	15.55	15.90	17.15	21.70	15.25	15.15	15.20	15.20	15.25	15.15	16.00	15.50
21.....	15.60	16.00	16.95	26.03	15.15	15.35	15.30	15.30	15.10	15.30	15.85	15.40
22.....	15.45	16.00	16.70	24.85	15.10	15.05	15.20	15.55	15.20	15.20	15.75	15.40
23.....	15.45	15.95	16.55	22.40	14.90	15.05	15.15	15.65	15.20	15.20	16.00	15.50
24.....	15.55	16.00	16.45	20.90	14.85	15.10	15.15	15.50	15.20	15.20	15.85	15.60
25.....	15.60	15.95	16.40	19.65	14.70	15.05	14.95	15.55	15.20	15.35	15.75	15.60
26.....	15.70	15.95	17.10	19.25	14.70	15.00	15.15	15.60	15.15	15.30	15.55	15.55
27.....	15.85	15.80	17.95	20.20	14.50	15.10	15.20	15.45	15.30	15.25	15.70	15.80
28.....	15.85	15.75	24.26	19.70	14.65	15.15	15.20	15.35	15.30	15.15	15.65	15.65
29.....	16.00	......	24.94	19.45	14.60	15.35	15.15	14.90	15.25	15.05	16.15	15.55
30.....	16.45	......	22.60	20.30	14.65	15.25	15.10	14.60	15.15	15.15	16.40	15.60
31.....	16.75	......	21.15	......	14.55	......	15.05	15.75	......	15.15	......	15.50

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River above Dam at Cohoes

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	156.57	157.82	155.92	158.57	157.22	155.02	156.22	156.77	160.72	155.07	156.07	160.27
2.....	155.57	157.52	155.02	158.57	156.82	154.77	157.42	157.52	160.17	154.47	156.47	160.52
3.....	155.97	157.07	155.37	158.52	156.77	154.52	156.52	158.22	160.12	154.47	155.57	160.67
4.....	156.12	156.87	155.27	157.87	156.17	156.72	159.57	157.47	160.22	155.87	154.17	160.77
5.....	155.52	156.82	155.37	157.62	156.17	154.82	160.12	155.77	160.32	155.17	154.67	160.87
6.....	155.47	156.82	155.47	157.02	156.72	155.12	159.12	156.22	160.52	154.92	155.92	160.87
7.....	155.42	156.77	155.87	156.77	156.77	155.57	158.07	155.42	160.27	154.22	157.17	160.32
8.....	155.57	156.87	156.37	156.97	156.52	155.47	159.77	157.37	159.47	154.12	160.12	160.17
9.....	155.67	156.22	155.42	159.12	156.02	155.42	159.22	158.02	159.32	154.52	158.37	160.22
10.....	156.12	155.97	155.37	158.32	156.32	155.92	159.72	158.82	159.17	154.67	154.52	160.07
11.....	156.12	155.87	155.52	157.97	156.07	155.57	160.27	156.87	157.27	154.72	155.67	160.02
12.....	155.52	154.97	155.92	157.87	155.92	155.67	160.47	156.97	154.62	155.17	156.92	160.12
13.....	153.62	154.97	155.82	157.07	156.52	156.52	160.32	155.62	155.47	154.67	156.27	160.57
14.....	155.02	155.57	156.12	156.97	156.97	156.62	158.72	154.67	155.17	154.22	157.27	159.57
15.....	154.92	156.12	156.62	157.07	156.62	155.57	159.02	155.42	154.47	154.12	159.87	157.72
16.....	154.82	154.47	156.07	157.12	156.37	155.22	158.52	156.02	155.02	154.62	158.92	160.07
17.....	156.12	154.97	156.37	157.12	156.17	154.52	159.02	159.27	156.97	154.57	159.57	160.17
18.....	156.12	155.27	157.12	157.47	156.07	154.62	159.67	160.02	154.87	155.92	160.32	160.22
19.....	155.67	155.07	157.42	157.52	155.67	154.67	160.22	160.07	155.12	157.17	160.27	160.52
20.....	155.32	155.47	157.42	157.97	155.57	154.87	158.32	160.17	155.57	160.12	160.22	160.67
21.....	155.37	155.87	156.97	158.87	155.52	158.32	157.42	159.57	157.87	158.87	160.42	159.77
22.....	155.17	156.52	156.92	158.47	155.47	159.07	158.02	158.37	157.32	158.47	160.37	157.12
23.....	154.97	155.32	156.42	157.57	155.52	158.52	156.82	158.47	155.97	156.62	160.17	156.47
24.....	155.97	155.22	156.32	157.12	155.92	157.97	156.72	156.17	156.22	154.82	159.02	159.32
25.....	156.27	155.27	156.32	156.82	154.87	157.67	156.62	155.27	155.92	157.97	159.97	159.62
26.....	155.17	154.97	156.62	156.92	155.27	156.57	158.27	156.37	155.67	158.62	159.82	159.07
27.....	155.47	154.87	157.82	157.27	155.32	156.47	158.92	154.57	154.32	158.07	159.82	158.47
28.....	155.72	155.62	159.77	157.22	155.22	159.42	158.37	157.17	155.32	157.62	160.47	157.22
29.....	156.02	......	159.97	156.92	155.07	159.47	157.37	159.17	155.42	157.32	161.12	158.52
30.....	156.57	......	159.27	157.37	155.27	159.07	157.02	160.62	154.87	155.72	160.47	159.52
31.....	157.37	......	158.52	......	155.47	......	156.12	160.77	......	153.87	......	159.97

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River at Dunsbach Ferry

1914	Jan.*a*	Feb.*a*	Mar.*a*	April *a*	May *a*	June *a*	July *a*	Aug.*a*	Sept.*a*	Oct.	Nov.	Dec.
1	......	......	......	......	......	......	......	......	......	*a*	169.70	170.90
2	......	......	......	......	......	......	......	......	......	*a*	169.70	170.90
3	......	......	......	......	......	......	......	......	......	*a*	169.80	170.90
4	......	......	......	......	......	......	......	......	......	*a*	169.80	170.90
5	......	......	......	......	......	......	......	......	......	*a*	169.90	170.90
6	......	......	......	......	......	......	......	......	......	*a*	169.80	170.90
7	......	......	......	......	......	......	......	......	......	*a*	169.75	170.90
8	......	......	......	......	......	......	......	......	......	*a*	169.70	170.90
9	......	......	......	......	......	......	......	......	......	*a*	169.70	170.90
10	......	......	......	......	......	......	......	......	......	*a*	169.60	170.90
11	......	......	......	......	......	......	......	......	......	*a*	169.65	170.90
12	......	......	......	......	......	......	......	......	......	*a*	169.65	170.90
13	......	......	......	......	......	......	......	......	......	*a*	169.70	170.90
14	......	......	......	......	......	......	......	......	......	*a*	169.70	170.90
15	......	......	......	......	......	......	......	......	......	*a*	169.75	170.90
16	......	......	......	......	......	......	......	......	......	*a*	169.70	170.90
17	......	......	......	......	......	......	......	......	......	*a*	169.95	170.90
18	......	......	......	......	......	......	......	......	......	*a*	170.25	170.90
19	......	......	......	......	......	......	......	......	......	*a*	170.60	170.90
20	......	......	......	......	......	......	......	......	......	*a*	170.70	170.90
21	......	......	......	......	......	......	......	......	......	*a*	170.90	170.95
22	......	......	......	......	......	......	......	......	......	171.00	170.90	171.00
23	......	......	......	......	......	......	......	......	......	170.45	170.90	171.00
24	......	......	......	......	......	......	......	......	......	169.85	170.90	171.05
25	......	......	......	......	......	......	......	......	......	169.80	170.90	171.10
26	......	......	......	......	......	......	......	......	......	169.90	170.90	171.10
27	......	......	......	......	......	......	......	......	......	169.90	170.90	*a*
28	......	......	......	......	......	......	......	......	......	169.95	170.90	*a*
29	......	......	......	......	......	......	......	......	......	169.85	170.90	*a*
30	......	......	......	......	......	......	......	......	......	169.75	170.90	*a*
31	......	......	......	......	......	......	......	......	......	169.70	......	*a*

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River above Vischer's Ferry Dam

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	211.54	212.40	......	214.50	212.95	......	211.30	211.25	211.72	211.23	211.24	......
2	211.50	212.34	211.51	214.60	212.90	......	211.34	211.24	211.58	211.22	211.23	211.89
3	211.48	212.15	......	214.20	212.50	211.42	211.35	211.25	211.55	211.23	211.24	......
4	211.48	212.09	......	213.80	212.40	211.46	211.33	211.26	211.63	211.24	211.24	......
5	211.49	212.05	......	213.20	212.55	211.42	211.31	211.26	211.60	211.24	211.26	211.81
6	211.48	212.06	......	213.00	212.40	211.40	211.30	211.26	211.52	211.23	211.31	......
7	211.47	212.08	......	212.80	212.60	211.44	211.35	211.25	211.41	211.24	211.35	......
8	211.48	212.03	......	212.90	212.85	211.50	211.39	211.25	211.41	211.26	211.31	......
9	211.49	211.94	......	215.20	212.75	211.53	211.40	211.24	211.48	211.25	211.23	......
10	211.49	211.87	......	214.10	212.60	211.61	211.42	211.25	211.43	211.26	211.25	......
11	211.44	211.82	......	213.70	212.60	211.53	211.42	211.25	211.42	211.25	211.37	211.52
12	211.49	211.73	......	213.50	212.70	211.49	211.51	211.23	211.30	211.22	211.33	211.52
13	211.39	211.69	......	213.60	212.80	211.48	211.46	211.23	211.24	211.22	211.31	......
14	......	211.70	......	213.10	212.90	211.40	211.35	211.24	211.24	211.23	211.34	211.41
15	......	211.68	......	213.00	212.75	211.42	211.38	211.22	211.29	211.24	211.33	211.36
16	......	211.61	211.67	213.20	212.45	211.35	211.36	211.21	211.32	211.27	211.38	211.73
17	......	211.55	......	213.20	212.25	211.33	211.40	211.20	211.31	211.28	211.58	......
18	......	......	......	213.30	212.00	211.28	211.39	......	211.29	211.27	211.59	211.57
19	......	......	......	213.40	211.90	211.26	211.26	......	211.30	211.39	......	211.55
20	......	......	......	214.10	211.80	211.24	211.27	......	211.32	211.48	......	......
21	211.48	......	......	215.00	211.80	211.29	211.27	......	211.29	211.37	......	......
22	211.48	......	......	213.90	211.70	211.28	211.27	......	211.26	211.36	......	211.44
23	211.49	......	......	213.50	211.70	211.28	211.28	......	211.28	211.32	......	......
24	211.52	......	......	213.10	......	211.27	211.28	211.45	211.28	211.34	211.54	211.45
25	211.51	......	......	213.00	......	211.25	211.28	......	211.26	211.34	211.45	211.43
26	211.50	......	......	213.20	......	211.27	211.26	......	211.26	211.34	......	211.41
27	211.54	......	......	213.00	......	211.31	211.27	......	211.27	211.30	......	211.42
28	211.59	......	......	212.75	......	211.33	211.27	......	211.26	211.32	......	211.44
29	211.65	......	......	213.20	......	211.40	211.28	......	211.25	211.32	......	211.44
30	211.84	......	214.90	213.10	......	211.32	211.28	......	211.23	211.27	......	......
31	212.27	......	214.30	......	......	......	211.28	......	......	211.21	......	211.50

NOTE.— March 30 to May 23, concrete gage read; others from automatic gage record. Record for February 18 to March 29 lost when gage was carried out by ice, Elevations converted from U. S. G. S. gage heights.

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River above State Dam at Rexford

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	211.68	211.88	211.88	*a*	213.83	211.78	211.38	211.38	211.38	211.38	211.33	211.78
2.....	211.68	211.98	211.88	*a*	213.28	211.78	211.38	211.38	211.38	211.38	211.38	211.78
3.....	211.68	212.18	211.88	*a*	213.28	211.68	211.38	211.28	211.38	211.38	211.38	211.78
4.....	211.68	212.18	211.88	*a*	213.28	211.68	211.38	211.28	211.38	211.38	211.38	211.78
5.....	211.68	212.08	211.88	*a*	213.53	211.58	211.43	211.28	211.38	211.38	211.38	211.78
6.....	211.68	211.98	211.88	*a*	213.33	211.58	211.58	211.38	211.38	211.38	211.38	211.78
7.....	211.68	211.98	211.88	*a*	213.28	211.48	211.63	211.38	211.38	211.38	211.38	211.78
8.....	211.68	211.88	211.88	*a*	213.03	211.48	211.68	211.28	211.38	211.38	211.38	211.78
9.....	211.68	211.88	211.88	*a*	212.88	211.48	211.58	211.28	211.38	211.38	211.38	211.78
10.....	211.68	211.88	211.88	*a*	212.88	211.38	211.58	211.28	211.38	211.28	211.38	211.78
11.....	211.68	211.88	211.88	214.68	212.88	211.38	211.48	211.38	211.38	211.28	211.38	211.98
12.....	211.68	211.88	211.88	214.53	212.78	211.38	211.48	211.48	211.38	211.28	211.38	211.88
13.....	211.68	211.88	211.88	214.23	212.78	211.38	211.48	211.48	211.38	211.38	211.38	211.78
14.....	211.68	211.88	211.88	213.78	212.68	211.38	211.48	211.38	211.38	211.38	211.38	211.78
15.....	211.68	*a*	211.88	213.48	212.68	211.38	211.48	211.38	211.38	211.38	211.38	211.68
16.....	211.68	*a*	212.08	213.48	212.68	211.38	211.48	211.28	211.38	211.28	211.53	211.58
17.....	211.68	*a*	212.38	213.63	212.68	211.38	211.48	211.28	211.28	211.38	211.73	211.58
18.....	211.68	*a*	212.88	214.08	212.58	211.38	211.48	211.28	211.28	211.38	211.88	211.58
19.....	211.68	*a*	212.88	215.13	212.58	211.58	211.48	211.28	211.28	211.38	311.83	211.53
20.....	211.68	211.88	212.48	215.78	212.48	211.58	211.48	211.28	211.28	211.38	211.88	211.53
21.....	211.68	211.88	212.38	217.58	212.38	211.53	211.48	211.28	211.33	211.38	211.98	211.53
22.....	211.68	211.88	212.08	215.58	212.38	211.48	211.48	211.28	211.38	211.28	211.93	211.58
23.....	211.68	211.88	212.08	214.78	212.28	211.38	211.48	211.38	211.38	211.33	211.78	211.58
24.....	211.68	211.88	212.08	213.48	212.18	211.38	211.38	211.38	211.38	211.28	211.68	211.53
25.....	211.68	211.88	212.08	213.58	212.03	211.38	211.38	211.38	211.38	211.33	211.68	211.53
26.....	211.68	211.88	212.03	213.68	212.08	211.38	211.38	211.48	211.38	211.38	211.68	211.53
27.....	211.68	211.88	215.28	213.93	211.98	211.38	211.38	211.48	211.38	211.33	211.68	211.58
28.....	211.68	211.88	*a*	214.43	211.93	211.38	211.38	211.48	211.38	211.38	211.78	211.58
29.....	211.68	......	*a*	215.03	211.88	211.38	211.38	211.38	211.38	211.38	211.78	211.58
30.....	211.68	......	*a*	214.63	211.88	211.38	211.38	211.38	211.38	211.38	211.78	211.58
31.....	211.68	......	*a*	......	211.78	......	211.38	211.38	......	211.33	......	211.58

a No record. NOTE.— Record previously published as at aqueduct at Rexford gives water urface above State dam, not at canal aqueduct.

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Daily Elevation of Water-surface (B. C. Datum) of Mohawk River at Schenectady

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	211.66	213.31	212.46	218.06	214.86	211.41	211.41	211.41	211.91	211.41	211.31	211.96
2.....	211.66	213.16	212.46	219.91	213.46	211.41	*a*	211.41	211.71	211.31	211.31	211.81
3.....	211.66	212.76	212.46	218.91	212.96	211.41	211.41	211.36	211.71	211.31	211.31	212.06
4.....	211.66	212.46	211.66	216.11	212.71	211.46	211.41	211.36	211.71	211.31	211.41	212.26
5.....	211.66	212.46	211.66	215.01	212.46	211.41	211.41	211.41	211.71	211.41	211.41	212.16
6.....	211.66	212.46	211.66	214.31	214.61	211.41	211.41	211.41	211.61	211.41	211.41	212.01
7.....	211.66	212.46	211.66	213.81	213.51	211.41	211.41	211.41	211.51	211.41	211.41	211.91
8.....	211.66	212.46	211.66	213.31	212.96	211.61	211.41	211.41	211.46	211.41	211.41	211.71
9.....	211.66	212.46	211.66	222.58	212.36	211.61	211.41	211.41	211.61	211.41	211.41	211.66
10.....	211.66	212.46	211.66	217.81	212.61	211.61	211.41	211.41	211.46	211.41	211.41	211.66
11.....	211.66	212.46	211.66	216.56	211.71	211.56	211.41	211.41	211.51	211.41	211.41	211.51
12.....	211.66	212.46	211.66	216.41	211.96	211.51	211.61	211.41	211.41	211.41	211.41	211.61
13.....	211.66	212.46	211.66	215.91	213.96	211.51	211.56	211.31	211.41	211.41	211.41	211.61
14.....	211.66	212.46	211.66	214.71	214.11	211.41	211.41	211.31	211.41	211.41	211.41	211.56
15.....	211.66	212.46	211.76	214.71	213.21	211.51	211.41	211.31	211.41	211.41	211.41	211.46
16.....	211.66	212.46	211.91	214.71	212.81	211.41	211.41	211.21	211.41	211.41	211.46	211.71
17.....	211.66	212.46	212.06	215.21	212.56	211.41	211.46	211.31	211.41	211.41	211.56	211.91
18.....	211.66	212.46	212.46	215.21	211.96	211.41	211.46	211.21	211.41	211.41	211.71	211.91
19.....	211.66	212.46	213.16	215.71	211.61	211.41	211.36	211.21	211.41	211.41	211.71	211.91
20.....	211.66	212.46	213.16	217.88	211.96	211.36	211.31	211.36	211.41	211.56	211.71	211.91
21.....	211.66	212.46	212.66	221.96	211.86	211.31	211.31	211.56	211.41	211.41	211.71	211.91
22.....	211.66	212.46	212.56	218.11	211.71	211.41	211.41	211.61	211.41	211.41	211.81	211.91
23.....	211.66	212.46	212.21	215.46	211.51	211.41	211.41	211.71	211.41	211.41	211.71	211.91
24.....	211.66	212.46	212.06	214.46	211.61	211.41	211.41	211.56	211.41	211.41	211.71	211.91
25.....	211.66	212.46	212.11	213.66	211.46	211.36	211.41	211.56	211.41	211.41	211.61	211.91
26.....	211.66	212.46	212.26	214.11	211.66	211.41	211.41	211.51	211.41	211.41	211.51	211.91
27.....	211.66	212.46	216.36	214.96	211.61	211.41	211.41	211.41	211.36	211.41	211.61	211.91
28.....	211.66	212.46	229.16	214.66	211.61	211.41	211.41	211.46	211.41	211.41	211.91	211.91
29.....	211.71	......	224.91	214.11	211.61	211.41	211.41	211.51	211.41	211.41	211.86	211.91
30.....	212.16	......	220.16	215.31	211.56	211.41	211.41	212.41	211.41	211.41	211.71	211.91
31.....	213.41	......	218.41	......	211.46	......	211.41	212.21	......	211.31	......	211.91

NOTE. — Gage at Scotia bridge, Washington avenue.

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River at Tribes Hill

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	268.31	273.71	269.11	274.86	272.31	268.51	267.51	267.01	267.41	266.91	266.91	267.26
2	268.21	272.51	269.11	275.31	272.01	268.51	267.31	267.01	267.31	266.91	266.91	267.51
3	268.21	272.51	269.11	274.81	271.71	268.31	267.21	267.11	267.21	266.91	266.91	267.46
4	268.31	272.36	269.11	274.16	271.01	268.31	267.21	267.11	267.21	267.01	266.91	267.31
5	268.31	272.01	269.11	272.11	270.21	268.51	267.11	267.01	267.11	267.01	267.01	267.31
6	268.21	271.71	269.11	271.41	271.71	268.51	267.21	267.11	267.11	267.01	266.91	267.11
7	268.31	271.31	269.11	271.71	271.41	268.51	267.41	267.11	267.01	267.11	266.91	267.31
8	268.21	270.51	269.11	273.31	271.01	268.51	267.31	267.01	267.01	267.31	266.91	267.31
9	268.31	270.51	269.11	276.71	270.01	268.61	267.21	266.91	267.11	267.11	266.91	267.21
10	268.21	270.51	269.11	273.71	269.91	268.41	267.31	266.91	267.01	267.11	267.01	267.21
11	268.21	270.11	269.11	273.21	270.01	268.51	267.21	266.81	267.01	267.01	266.91	267.51
12	268.21	269.71	269.11	272.31	270.51	268.51	267.01	266.71	266.91	267.01	266.91	266.71
13	268.21	269.71	269.11	271.71	271.66	268.61	267.01	266.71	267.01	267.01	266.91	266.71
14	268.21	269.31	269.11	271.91	271.31	268.51	267.11	266.81	267.01	267.01	267.01	266.91
15	268.21	269.31	269.11	271.71	269.71	268.51	267.11	266.81	267.11	267.01	267.01	266.71
16	268.21	269.31	269.11	271.81	269.31	268.31	267.31	266.91	267.01	267.11	267.11	266.71
17	267.91	269.31	269.11	271.71	269.11	268.41	267.51	266.91	267.01	267.21	267.11	265.56
18	267.71	269.31	269.11	272.11	268.91	268.31	267.41	266.91	267.01	267.21	267.01	*a*
19	267.71	269.31	269.11	274.21	269.11	268.41	267.21	267.11	267.01	267.41	267.01	*a*
20	267.71	269.31	269.11	276.21	269.31	268.51	267.21	267.11	267.01	267.21	267.01	*a*
21	267.71	269.31	269.11	273.71	269.01	268.31	267.11	266.91	267.01	267.11	267.01	*a*
22	267.51	269.11	269.11	273.31	268.91	268.11	267.11	266.91	267.11	267.11	267.01	*a*
23	267.51	269.11	269.11	272.71	269.11	268.01	267.01	266.91	267.11	267.01	267.01	*a*
24	267.51	269.11	269.11	272.01	268.71	267.71	267.01	266.91	267.01	267.01	267.01	*a*
25	267.51	269.11	269.11	271.71	268.61	267.51	267.01	266.81	267.01	267.01	267.11	*a*
26	267.51	269.11	269.11	272.81	268.51	267.31	267.01	266.91	267.11	267.01	267.11	*a*
27	267.51	269.11	276.51	272.71	268.51	267.41	267.11	267.01	267.01	267.11	267.11	*a*
28	267.71	269.11	279.11	272.31	268.51	267.21	267.11	267.11	267.01	267.01	267.11	*a*
29	268.71	......	277.51	272.11	268.51	267.41	267.21	267.21	267.01	267.01	267.01	*a*
30	272.01	......	275.21	273.01	268.71	267.71	267.11	267.71	266.91	267.11	266.71	*a*
31	273.71	......	273.71	......	268.61	......	267.01	267.51	......	267.01	......	*a*

***a* Water-surface below elevation 263.71, limit of gage.**

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River at Fultonville Bridge, Fonda

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	272.94	277.69	273.74	283.69	277.89	277.89	277.19	278.09	278.89	278.19	277.64	278.19
2	272.94	277.39	273.94	281.69	276.59	277.84	278.19	278.09	278.89	278.19	277.29	278.19
3	272.94	277.09	273.99	280.69	275.74	277.79	278.19	277.99	278.99	278.19	277.09	277.59
4	272.94	276.49	273.99	279.04	275.44	277.69	278.19	278.09	277.89	278.19	276.89	276.84
5	272.94	275.84	274.04	278.14	275.34	276.69	278.19	278.09	277.99	278.19	276.99	277.69
6	272.94	275.29	274.94	277.39	277.19	278.29	278.19	278.09	278.04	278.19	276.99	277.89
7	272.94	274.94	274.34	277.14	277.84	278.34	278.19	278.09	278.19	278.19	277.09	278.09
8	272.94	274.04	274.49	279.34	275.59	278.19	278.19	278.09	278.19	278.19	277.29	277.34
9	272.94	273.84	274.49	286.09	274.84	278.19	278.19	278.09	278.19	278.19	277.39	276.79
10	272.94	273.69	274.49	282.19	273.89	278.14	278.19	278.19	278.19	278.09	277.59	276.49
11	272.94	273.69	274.49	280.09	274.09	277.94	278.19	277.99	278.19	278.04	277.84	276.24
12	272.94	273.69	274.49	279.44	274.29	278.14	278.19	277.99	278.19	277.99	277.99	275.89
13	272.94	273.49	274.59	278.69	276.29	278.11	278.44	277.89	277.99	277.89	277.99	275.69
14	272.94	273.49	274.69	278.09	277.04	278.19	278.59	277.79	277.84	277.89	277.99	275.44
15	272.94	273.49	274.69	277.89	275.99	278.19	278.69	277.99	278.14	277.89	278.09	274.54
16	272.94	273.49	274.89	278.09	275.34	277.94	278.94	278.04	277.94	277.94	278.09	273.39
17	272.94	273.49	275.04	278.64	275.19	276.79	278.59	278.29	276.89	277.74	278.09	272.49
18	272.94	273.49	277.09	279.14	278.04	277.04	278.24	278.44	277.99	277.79	278.09	272.49
19	272.94	273.59	277.29	280.29	278.99	276.19	278.19	278.59	278.19	277.89	278.19	272.49
20	272.94	273.59	276.99	283.24	278.39	276.44	278.19	278.69	278.29	277.74	278.19	272.49
21	272.94	273.69	276.54	285.89	278.19	276.69	278.19	278.69	278.14	277.89	278.19	272.49
22	272.94	273.49	276.34	282.74	278.19	277.19	278.19	278.69	278.04	277.89	278.19	272.49
23	272.94	273.49	276.29	281.29	278.19	277.44	278.09	278.69	278.19	277.94	278.09	272.49
24	272.94	273.49	275.94	278.54	278.19	277.69	277.99	278.69	278.19	277.84	277.89	272.49
25	272.94	273.49	275.04	277.69	278.19	277.89	278.09	278.69	278.19	277.94	277.94	272.49
26	272.94	273.59	275.44	278.09	278.19	278.04	277.99	278.69	278.19	277.84	278.19	272.49
27	272.94	273.59	281.44	279.49	278.19	278.09	278.14	278.89	279.19	277.74	278.19	272.49
28	272.94	273.69	291.44	277.94	278.19	278.09	278.14	278.99	278.19	277.89	278.19	272.49
29	273.49	......	287.94	278.14	278.09	278.19	278.04	278.99	278.19	277.89	278.19	272.49
30	274.59	......	285.44	278.99	277.99	278.19	278.14	278.99	278.19	277.89	278.19	272.49
31	276.49	......	283.69	......	277.94	......	278.09	278.99	......	277.99	......	272.49

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River at Canajoharie

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	279.72	283.52	279.42	291.52	285.22	280.97	281.87	282.12	286.37	286.17	284.97	285.92
2.....	279.72	282.72	279.42	292.22	284.17	281.07	281.62	282.07	285.27	286.12	285.07	285.97
3.....	279.62	282.37	279.42	291.37	282.97	281.42	281.67	282.17	285.17	286.12	285.02	286.07
4.....	279.87	282.12	279.42	287.62	282.62	281.37	281.62	282.12	285.32	285.82	285.12	286.02
5.....	279.67	282.02	279.42	285.52	282.67	281.27	281.87	282.12	284.27	285.62	284.87	286.07
6.....	279.67	281.52	279.62	284.27	283.37	281.62	281.82	282.07	284.22	285.57	284.97	285.92
7.....	279.47	281.62	279.62	284.12	284.32	282.77	281.97	282.17	285.52	285.57	285.02	285.97
8.....	279.42	281.47	279.67	289.62	284.02	282.77	281.92	282.12	285.92	285.52	285.07	285.92
9.....	279.32	281.32	279.92	291.42	283.42	283.17	281.82	282.12	285.62	285.47	284.97	285.77
10.....	279.27	280.82	279.62	290.72	282.97	282.92	282.02	282.17	285.37	285.52	285.02	284.12
11.....	279.32	280.57	279.77	288.42	281.62	283.52	282.12	282.22	285.37	285.57	285.12	283.47
12.....	279.17	280.12	280.02	285.92	281.52	283.87	282.07	282.12	285.27	285.62	285.02	281.67
13.....	279.12	279.62	279.97	285.02	283.42	284.32	282.17	282.17	285.27	285.62	285.02	280.27
14.....	279.27	279.62	279.57	284.42	283.72	284.27	282.12	282.12	285.37	285.52	285.07	279.97
15.....	279.22	279.62	279.82	284.87	283.17	283.97	282.22	282.12	285.12	285.42	285.07	279.32
16.....	279.02	279.57	280.12	285.87	281.57	283.87	282.12	282.12	285.12	285.32	284.92	279.12
17.....	279.02	279.42	282.52	286.92	280.82	283.72	282.07	282.12	285.07	285.32	284.97	279.02
18.....	279.07	279.42	285.77	287.02	279.57	283.27	282.12	282.17	285.02	285.27	285.07	279.07
19.....	279.02	279.42	285.07	287.27	279.47	282.97	282.22	282.32	285.12	284.87	284.92	279.12
20.....	279.02	279.37	283.62	292.62	279.42	282.72	282.17	282.52	285.47	284.82	285.12	278.82
21.....	279.02	279.42	283.07	294.37	278.87	282.62	282.22	282.57	286.02	284.87	285.12	278.87
22.....	279.07	279.42	282.77	289.87	278.87	282.77	282.12	282.42	286.17	285.02	285.07	278.92
23.....	279.02	279.47	282.42	285.67	278.82	282.62	282.12	282.22	286.12	284.87	285.17	278.92
24.....	279.42	279.42	282.17	284.72	278.77	282.57	282.07	282.22	286.17	284.97	284.92	278.87
25.....	279.52	279.42	282.67	283.92	278.82	282.62	282.12	282.22	286.12	285.27	285.17	278.92
26.....	279.72	279.37	283.27	287.57	279.47	282.47	282.22	282.32	286.12	285.22	284.77	278.82
27.....	280.37	279.42	294.12	286.92	280.17	282.32	282.17	282.12	286.12	285.12	284.52	278.82
28.....	281.42	279.42	302.02	285.97	280.57	282.42	282.22	282.17	286.12	285.17	284.62	278.87
29.....	284.07	......	293.62	285.27	280.82	282.22	282.17	282.17	286.17	285.07	284.37	278.87
30.....	284.52	......	291.67	285.17	281.02	282.22	282.27	286.87	286.22	285.12	284.77	278.92
31.....	283.67	......	290.92	......	280.82	......	282.22	287.07	......	284.92	......	278.87

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River at Fort Plain

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	288.96	292.46	289.66	298.81	295.56	292.46	292.66	293.06	293.66	293.76	293.66	293.46
2.....	288.96	291.56	289.66	299.91	294.16	292.56	292.66	293.06	293.66	293.76	293.56	293.56
3.....	288.86	291.16	289.86	297.51	292.41	292.66	292.46	293.06	293.86	293.66	293.46	293.91
4.....	288.86	290.86	290.06	295.96	293.66	292.81	292.56	293.11	293.86	293.66	293.56	293.46
5.....	288.86	291.11	290.16	293.86	293.76	293.06	292.66	293.21	293.81	293.86	293.66	293.46
6.....	288.86	290.81	290.16	292.81	294.76	292.96	293.26	293.26	293.76	293.76	293.46	293.46
7.....	288.86	290.36	290.16	292.81	294.01	292.96	293.06	293.16	293.66	293.76	293.16	293.41
8.....	288.86	290.06	290.16	298.21	293.71	293.26	292.96	293.16	293.56	293.46	293.31	293.36
9.....	288.86	289.96	290.11	300.26	293.36	293.21	292.86	293.06	293.26	293.46	293.66	293.36
10.....	288.86	289.66	290.16	298.16	293.06	292.86	293.16	292.91	293.21	293.56	293.66	292.96
11.....	288.86	289.46	290.86	295.86	292.96	293.01	293.36	292.86	293.26	293.66	293.76	293.06
12.....	288.86	289.36	290.86	295.26	293.06	293.11	292.96	292.86	293.16	293.66	293.76	293.16
13.....	288.86	289.16	291.01	294.51	294.96	292.96	292.66	292.91	293.16	293.46	293.66	293.06
14.....	288.96	289.06	291.16	293.31	295.21	293.11	292.76	292.96	292.16	293.46	293.66	293.06
15.....	288.96	289.11	291.21	293.46	293.81	293.06	292.96	293.06	293.26	293.66	293.56	292.96
16.....	288.96	289.26	291.61	294.51	293.36	292.66	293.06	293.06	293.26	293.81	293.66	292.86
17.....	288.96	289.66	292.11	295.21	293.01	292.66	293.01	292.86	293.16	293.96	293.66	292.66
18.....	289.01	289.66	293.86	295.56	292.76	292.46	292.96	293.06	293.11	294.06	293.66	292.06
19.....	289.06	289.76	294.01	296.61	292.56	292.36	293.01	293.11	293.01	293.86	293.46	*b*
20.....	289.76	289.86	292.71	*a*	292.66	292.66	292.96	293.96	292.96	293.66	293.46	*b*
21.....	289.76	289.91	291.21	*a*	292.66	292.76	293.16	293.21	293.06	293.46	293.46	*b*
22.....	288.86	289.96	290.86	297.96	292.66	292.81	293.06	293.16	293.36	293.46	293.46	*b*
23.....	288.86	289.86	290.76	295.86	292.66	292.91	292.86	293.06	293.46	293.66	293.36	*b*
24.....	289.96	289.66	290.76	294.71	292.76	293.16	292.91	293.11	293.76	293.86	293.41	*b*
25.....	289.96	289.46	290.86	293.96	292.81	293.16	293.16	293.96	294.16	293.86	293.46	*b*
26.....	289.96	289.46	292.21	294.91	292.86	292.86	293.16	293.41	293.96	293.86	293.46	*b*
27.....	289.96	289.36	298.46	295.41	292.96	292.91	293.06	293.16	293.81	293.66	293.26	*b*
28.....	289.96	289.66	*a*	295.51	292.96	293.06	292.96	293.36	293.91	293.46	293.26	*b*
29.....	290.31	......	299.86	296.31	292.86	293.06	292.91	293.96	293.81	292.86	293.26	*b*
30.....	291.56	......	299.41	296.91	292.71	293.01	293.06	294.86	293.86	293.01	293.46	*b*
31.....	292.21	......	297.76	......	292.66	......	293.16	294.31	......	293.66	......	*b*

a No record. *b* Water below limit of gage.

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River at St. Johnsville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	295.60	299.50	296.30	304.85	300.80	294.15	299.85	302.10	302.45	299.50	300.40	301.25
2.....	295.40	298.60	296.60	306.55	299.65	294.65	299.90	302.10	302.05	300.05	300.40	301.90
3.....	295.30	297.80	296.50	304.45	298.30	294.10	299.95	302.15	302.60	300.00	300.65	302.45
4.....	295.30	297.45	296.60	302.90	298.50	294.00	299.80	302.15	302.60	299.75	300.55	302.05
5.....	295.40	298.45	296.60	300.60	298.80	294.35	299.75	302.10	302.25	299.95	300.70	301.55
6.....	295.15	297.90	296.70	299.45	300.20	294.35	299.95	302.05	302.35	300.20	300.50	301.25
7.....	295.20	297.45	296.80	299.45	299.20	294.40	300.15	301.95	302.05	300.10	300.45	300.75
8.....	295.22	296.75	296.65	304.65	298.75	294.85	300.40	301.80	302.10	300.05	300.55	300.75
9.....	295.10	296.20	296.75	306.10	297.45	296.55	300.50	301.20	301.45	300.00	300.70	300.90
10.....	295.20	296.25	297.25	304.50	297.25	297.50	300.50	300.90	301.05	299.95	300.90	300.30
11.....	295.10	296.15	297.65	302.65	297.25	297.50	300.80	301.15	301.00	299.85	300.80	300.10
12.....	295.20	296.05	297.95	302.85	296.60	297.40	300.80	301.85	301.15	299.85	301.00	299.75
13.....	295.50	295.90	298.05	301.65	299.50	297.05	300.55	301.95	301.05	300.15	300.85	299.40
14.....	295.80	295.90	298.10	300.55	299.75	296.85	300.60	301.95	300.95	300.30	301.55	300.50
15.....	295.65	295.85	298.10	300.95	298.35	296.85	300.50	301.60	301.05	300.25	301.30	300.95
16.....	295.75	296.00	298.80	301.30	297.10	297.15	300.25	301.85	301.20	300.30	301.85	297.10
17.....	295.70	296.50	299.45	301.75	206.75	298.05	300.30	301.20	301.15	300.35	302.15	294.40
18.....	295.75	296.60	301.25	302.50	295.90	299.35	300.90	301.70	300.95	300.70	302.00	294.15
19.....	295.80	296.50	300.75	303.60	295.40	299.70	301.25	302.20	301.35	300.75	301.25	294.35
20.....	295.80	296.50	299.45	307.60	295.40	300.05	300.85	302.20	300.95	300.25	301.30	294.40
21.....	295.75	296.50	298.10	309.05	295.35	299.85	300.80	301.50	299.55	299.60	301.25	294.45
22.....	295.70	296.40	298.00	304.95	295.10	299.65	301.75	301.65	298.20	300.95	300.95	295.10
23.....	295.75	296.35	297.95	303.20	294.65	299.60	301.90	301.65	297.75	300.70	300.95	295.35
24.....	295.70	296.30	297.90	301.05	294.85	299.85	301.90	301.25	297.70	300.85	300.45	295.65
25.....	295.70	296.15	298.10	300.10	295.10	299.85	302.10	302.20	298.20	300.90	300.15	296.05
26.....	295.75	296.00	300.55	301.05	294.95	299.80	302.05	302.15	298.25	300.95	300.25	296.10
27.....	295.95	296.10	305.70	302.15	294.75	299.85	302.00	302.10	298.00	301.00	300.95	296.00
28.....	296.15	296.10	307.95	301.65	294.60	299.75	302.05	301.95	298.20	300.30	301.90	295.85
29.....	297.05	......	307.35	301.90	294.45	299.80	302.20	301.95	299.00	300.15	301.35	295.55
30.....	299.00	......	306.10	302.10	294.25	299.85	302.10	303.15	299.30	300.15	301.25	295.55
31.....	299.65	......	304.75	......	294.15	......	302.20	302.35	......	300.30	......	295.45

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River above State Dam at Little Falls

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	363.71	364.71	363.71	366.51	365.31	363.31	363.31	363.11	364.51	363.61	364.11	363.71
2.....	363.71	364.31	363.71	367.21	365.01	363.11	363.31	363.11	364.41	363.81	364.11	364.01
3.....	363.71	364.31	363.71	366.71	364.51	363.11	363.31	363.11	364.51	364.01	364.11	364.31
4.....	363.81	364.31	363.71	365.81	364.51	363.11	363.31	363.01	364.61	364.11	364.11	364.31
5.....	363.71	364.51	363.81	365.26	364.71	363.31	363.31	362.31	364.76	364.11	364.11	364.11
6.....	363.71	364.31	363.91	364.76	365.31	363.51	363.51	362.31	364.61	364.11	364.11	364.11
7.....	363.71	364.11	363.91	364.61	365.11	363.51	363.51	362.31	364.51	364.01	364.11	364.01
8.....	363.71	363.81	363.91	366.81	364.71	363.71	363.51	362.31	364.51	363.81	364.11	364.01
9.....	363.71	363.81	364.01	367.06	364.36	363.81	363.51	362.31	364.41	363.81	364.11	363.91
10.....	363.81	363.71	364.01	366.66	364.51	363.81	363.51	362.31	364.21	364.11	364.11	363.91
11.....	363.71	363.91	364.11	365.91	364.51	363.81	363.51	362.31	363.81	364.01	364.11	363.71
12.....	363.71	364.11	364.11	365.61	364.51	363.81	363.51	362.31	364.21	364.01	364.11	363.61
13.....	363.71	364.11	364.31	365.06	364.81	363.81	363.31	362.31	364.21	364.01	364.11	363.61
14.....	363.71	364.11	364.31	364.61	364.91	363.81	363.31	362.31	364.01	364.01	364.11	363.61
15.....	363.71	363.81	364.31	365.11	364.66	363.81	363.31	363.06	363.81	364.01	363.61	363.61
16.....	363.71	363.61	364.41	365.31	364.51	363.61	363.31	363.06	364.01	364.01	363.61	363.61
17.....	363.71	363.61	364.51	365.31	364.21	363.51	363.31	362.56	363.81	364.31	363.61	363.51
18.....	363.81	363.61	365.11	365.61	363.91	363.51	363.31	363.06	364.21	364.31	364.11	363.51
19.....	363.71	363.61	364.71	365.66	363.91	363.31	363.31	363.51	364.11	364.31	364.11	363.41
20.....	363.71	363.61	364.26	367.56	363.81	363.31	363.11	363.81	364.01	364.31	364.01	363.41
21.....	363.71	363.61	364.11	368.31	363.71	363.31	363.11	364.01	363.81	364.31	364.01	363.41
22.....	363.71	363.61	364.11	366.61	363.51	363.31	363.11	363.91	363.61	364.31	363.91	363.41
23.....	363.71	363.61	364.11	365.91	363.31	363.31	362.46	363.71	363.36	364.31	363.71	363.41
24.....	363.71	363.61	363.91	365.66	363.31	363.31	362.31	363.51	363.31	364.31	363.71	363.41
25.....	363.71	363.61	364.06	365.31	363.31	363.31	363.21	363.71	363.81	364.31	363.71	363.41
26.....	363.71	363.71	364.76	365.11	363.31	363.31	363.21	363.71	363.81	364.31	363.71	363.41
27.....	363.71	363.71	366.91	365.11	363.31	363.31	363.26	364.91	363.81	364.31	363.71	363.41
28.....	363.71	363.71	368.11	365.31	363.31	363.31	363.21	364.91	363.51	364.31	364.01	363.41
29.....	364.41	......	367.96	365.41	363.31	363.31	363.21	365.01	363.46	364.01	364.11	363.41
30.....	364.86	......	367.46	365.81	363.31	363.31	363.11	365.26	363.61	364.01	363.71	363.66
31.....	364.81	......	367.01	......	363.31	......	363.11	365.01	......	364.01	......	363.71

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River at Washington St. Bridge, Herkimer

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	373.85	376.85	374.40	382.70	377.55	374.70	*a*	*a*	*a*	373.90	374.70	375.10
2......	373.85	376.35	374.30	382.45	375.85	374.85	*a*	*a*	*a*	374.35	374.55	374.90
3......	373.75	376.10	374.30	382.30	375.85	374.85	*a*	*a*	*a*	375.00	374.50	375.05
4......	373.75	376.10	374.40	382.25	375.40	375.15	*a*	*a*	*a*	374.70	374.90	375.15
5......	373.75	375.30	374.30	380.20	375.40	374.95	*a*	*a*	*a*	374.65	374.95	375.30
6......	373.80	375.05	374.20	380.05	375.60	374.75	*a*	*a*	*a*	374.50	375.05	375.15
7......	373.85	374.95	374.40	379.85	375.30	375.30	*a*	*a*	*a*	374.45	375.15	375.35
8......	373.85	375.00	374.70	379.65	375.05	375.15	*a*	*a*	*a*	374.65	374.75	375.20
9......	374.10	374.90	374.55	378.70	375.65	374.80	*a*	*a*	*a*	374.70	375.10	375.35
10......	374.20	374.75	374.50	378.45	377.10	374.75	*a*	*a*	*a*	374.75	375.25	375.30
11......	373.65	375.40	374.60	378.60	377.10	374.05	*a*	*a*	*a*	374.60	375.15	375.70
12......	373.90	375.25	374.70	378.45	377.10	374.35	*a*	*a*	*a*	374.65	375.15	375.80
13......	373.85	375.50	374.65	378.40	377.30	374.05	*a*	*a*	*a*	374.85	375.30	375.90
14......	373.80	376.45	374.65	378.35	375.85	374.65	*a*	*a*	*a*	375.10	375.40	376.05
15......	373.95	375.65	374.40	377.85	375.75	374.45	*a*	*a*	*a*	375.15	375.20	376.25
16......	374.45	374.60	374.50	377.80	375.55	374.65	*a*	*a*	*a*	375.35	375.35	375.80
17......	374.65	374.55	374.65	378.25	375.55	374.75	*a*	*a*	*a*	374.90	375.80	375.65
18......	374.70	374.55	374.85	378.15	375.60	374.60	*a*	*a*	*a*	375.00	376.15	375.65
19......	374.90	374.60	374.80	379.55	375.35	374.40	*a*	*a*	*a*	374.80	376.40	376.20
20......	374.75	374.50	374.95	380.45	375.30	374.65	*a*	*a*	*a*	375.25	376.30	376.25
21......	374.55	374.60	375.00	380.40	375.65	374.30	*a*	*a*	*a*	375.25	376.40	376.05
22......	374.90	374.55	374.20	379.00	375.70	374.25	*a*	*a*	*a*	374.90	375.15	376.15
23......	374.65	374.60	374.40	378.05	375.20	374.05	*a*	*a*	*a*	374.90	375.45	376.20
24......	375.15	374.50	374.45	376.90	375.00	374.00	*a*	*a*	*a*	375.10	375.60	375.95
25......	374.40	374.60	374.60	375.90	375.25	*a*	*a*	*a*	*a*	375.40	375.75	375.75
26......	374.55	374.50	375.05	376.80	374.90	*a*	*a*	*a*	*a*	375.25	376.00	376.20
27......	374.75	374.45	375.65	378.10	374.70	*a*	*a*	*a*	*a*	375.00	375.55	376.25
28......	375.15	374.65	382.65	377.30	374.65	*a*	*a*	*a*	*a*	374.85	375.40	376.15
29......	375.60	......	383.00	377.25	374.80	*a*	*a*	*a*	*a*	375.40	375.15	376.20
30......	376.50	......	383.10	376.40	374.70	*a*	*a*	*a*	*a*	375.30	375.40	376.05
31	377.15	......	383.05	......	374.70	......	*a*	*a*	......	375.00	......	375.75

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River at Mohawk St. Bridge, Herkimer

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	*a*	381.76	379.31	383.66	382.06	380.06	378.56	380.81	380.26	379.96	379.76	380.11
2......	*a*	381.56	379.21	383.56	380.41	380.01	379.51	380.51	380.31	379.81	379.91	380.21
3......	*a*	381.06	379.31	383.66	380.51	379.91	379.21	380.51	380.21	380.06	379.71	380.06
4......	*a*	380.71	379.21	383.66	378.81	380.16	379.16	380.36	380.31	379.61	380.06	380.01
5......	*a*	380.61	379.11	382.41	379.06	379.81	379.21	380.56	380.26	379.61	380.21	379.91
6......	*a*	380.51	379.11	382.31	379.91	380.06	379.56	380.61	380.66	379.71	380.31	380.21
7......	*a*	380.36	379.26	382.06	378.86	380.41	379.11	380.21	380.66	379.56	380.41	380.21
8......	*a*	380.21	379.61	381.61	378.81	380.26	378.66	380.46	380.46	379.56	379.96	379.91
9......	*a*	380.11	379.61	381.46	379.36	379.96	379.31	380.06	380.21	379.66	380.11	380.11
10......	*a*	380.01	379.71	381.21	380.66	379.86	379.71	380.06	380.11	379.66	380.01	380.41
11......	*a*	380.31	379.61	381.16	380.86	379.66	379.31	380.21	380.56	380.11	380.16	380.61
12......	378.51	380.16	379.56	380.96	380.81	379.66	379.26	380.06	380.66	380.06	380.11	380.71
13......	378.71	380.26	379.61	381.06	380.81	379.76	379.06	380.16	380.81	380.16	380.26	380.76
14......	378.71	380.56	379.66	381.01	380.26	380.06	378.76	380.71	381.01	379.76	380.41	380.96
15......	378.76	380.31	379.61	380.86	379.71	379.96	379.06	380.46	380.51	379.71	380.31	381.01
16......	378.86	379.81	379.71	380.31	379.86	380.16	378.96	380.26	380.46	380.11	380.46	381.26
17......	378.76	379.61	379.71	380.36	379.76	380.26	379.51	380.16	380.56	380.41	380.71	381.11
18......	379.61	379.66	379.81	380.56	380.01	380.36	379.31	380.26	380.66	380.11	380.91	381.36
19......	379.71	379.71	379.81	381.76	380.01	380.01	379.36	380.66	380.86	380.66	381.01	381.56
20......	379.56	379.41	380.01	385.56	380.06	380.11	379.31	380.86	381.01	380.16	381.16	381.66
21......	379.46	379.71	380.01	384.01	380.31	379.86	379.16	381.11	381.01	380.41	381.31	381.36
22......	379.61	379.91	379.61	382.86	380.66	379.96	380.16	381.26	380.56	380.01	380.11	381.16
23......	379.51	379.81	379.71	382.26	380.26	380.06	380.31	379.76	380.51	379.86	380.26	381.26
24......	380.06	379.71	379.76	382.31	380.06	380.06	380.21	380.01	381.01	379.91	380.61	381.21
25......	379.16	379.81	379.91	382.11	380.01	379.86	380.06	380.26	381.21	380.11	380.81	381.41
26......	379.66	379.81	379.71	381.51	379.86	379.76	380.06	379.96	381.31	380.11	380.96	381.71
27......	380.01	379.61	380.31	381.91	380.11	379.56	380.31	379.96	379.86	380.21	380.36	381.66
28......	380.06	379.71	383.16	381.36	380.06	379.56	380.21	380.56	380.11	380.11	380.11	381.61
29......	380.56	......	384.16	381.21	380.06	379.36	380.26	380.76	380.16	379.66	380.96	381.31
30......	381.76	......	384.26	380.36	380.71	379.16	380.66	380.06	380.11	379.56	380.36	381.06
31......	382.16	......	384.06	......	380.06	......	330.61	380.26	......	379.46	......	381.26

a Dam open; river dry at gaging station.

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River at Ilion

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	379.20	381.55	378.80	*a*	*a*	378.25	378.72	380.77	379.27	382.72	381.42	381.72
2.....	379.12	380.95	378.82	*a*	*a*	378.32	378.72	380.67	379.47	382.87	381.47	382.02
3.....	379.02	380.60	378.95	*a*	*a*	378.22	378.62	380.37	380.27	383.02	381.47	382.27
4.....	379.10	380.80	379.02	*a*	*a*	378.29	378.62	380.19	380.42	383.17	381.37	380.32
5.....	379.40	381.05	379.18	*a*	*a*	378.62	378.57	379.72	379.77	383.07	379.92	380.07
6.....	381.20	380.70	379.52	*a*	*a*	378.49	378.77	379.72	380.07	382.65	381.42	379.72
7.....	381.50	379.90	379.55	*a*	*a*	378.25	378.72	379.67	380.07	382.85	382.82	379.82
8.....	381.48	379.25	379.60	*a*	*a*	378.77	379.05	379.42	380.52	382.92	382.77	380.62
9.....	381.32	379.00	379.90	*a*	*a*	380.25	379.22	379.57	381.22	383.02	381.57	381.12
10.....	381.75	379.15	380.45	*a*	*a*	379.27	379.07	379.92	381.57	383.17	381.97	381.27
11.....	381.45	379.18	380.62	*a*	*a*	378.82	379.02	379.87	382.77	383.32	382.92	381.37
12.....	381.55	378.92	381.00	*a*	*a*	378.57	378.87	379.92	383.12	383.55	382.42	381.57
13.....	381.45	378.80	381.30	*a*	*a*	378.32	378.87	380.07	383.42	383.07	382.17	383.67
14.....	381.35	378.80	381.32	*a*	*a*	378.15	378.87	380.07	383.62	382.77	381.72	383.57
15.....	381.05	378.80	381.38	*a*	*a*	378.07	378.87	380.35	383.59	382.47	382.27	*a*
16.....	380.85	378.80	381.45	*a*	*a*	377.97	378.72	380.27	383.57	382.87	382.62	*a*
17.....	380.55	378.80	382.05	*a*	*a*	377.97	378.67	380.57	383.57	383.25	383.52	*a*
18.....	380.30	378.80	383.58	*a*	*a*	377.97	378.87	380.77	382.32	383.27	381.87	*a*
19.....	379.95	378.80	382.50	*a*	*a*	378.05	379.37	380.35	379.62	382.87	381.92	*a*
20.....	379.30	378.80	380.90	*a*	*a*	378.17	378.62	380.27	379.37	381.97	382.12	*a*
21.....	379.20	378.80	380.50	*a*	378.97	378.52	379.37	380.72	379.87	382.62	382.37	*a*
22.....	379.20	378.80	379.30	*a*	378.89	378.57	379.52	380.17	379.42	382.47	382.32	*a*
23.....	379.10	378.80	379.15	*a*	378.99	378.57	380.37	379.82	379.57	382.62	382.42	*a*
24.....	379.02	378.80	379.90	*a*	378.99	378.65	380.77	379.47	380.37	382.87	382.27	*a*
25.....	379.10	378.80	380.82	*a*	379.05	378.67	380.87	380.32	380.87	381.52	382.29	*a*
26.....	379.10	378.80	384.30	*a*	378.99	378.69	380.77	380.17	380.97	379.22	382.57	*a*
27.....	379.12	378.80	388.00	*a*	378.92	378.77	380.77	379.32	380.67	378.02	382.47	*a*
28.....	379.58	378.80	388.82	*a*	378.72	378.87	380.72	379.62	380.97	378.47	382.72	*a*
29.....	380.68	......	*a*	*a*	379.05	378.77	380.42	379.92	382.07	381.22	381.87	*a*
30.....	382.75	......	*a*	*a*	379.82	378.67	380.72	381.69	382.52	381.57	381.82	*a*
31.....	382.65	......	*a*	......	378.37	......	380.97	380.27	......	381.57	......	*a*

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River at Frankfort

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	379.50	382.25	378.92	387.20	382.25	378.50	379.40	381.15	379.58	*a*	381.60	381.45
2.....	379.38	381.42	379.15	387.92	381.55	378.45	379.00	380.98	379.75	*a*	381.50	382.35
3.....	379.30	380.72	379.22	387.38	381.05	378.42	378.95	381.55	380.55	*a*	381.50	382.65
4.....	379.32	381.35	379.40	385.35	380.82	378.62	379.00	380.72	380.55	*a*	381.25	380.20
5.....	379.62	382.15	379.55	383.25	381.50	378.88	378.92	380.72	380.35	*a*	380.15	380.30
6.....	381.35	381.15	379.72	382.55	382.12	378.72	378.85	380.15	380.40	*a*	380.60	379.90
7.....	381.65	380.50	379.80	382.12	381.52	378.50	378.95	379.82	380.55	*a*	382.85	379.90
8.....	381.70	379.88	379.80	387.50	381.00	379.10	379.90	379.72	381.20	*a*	382.60	380.55
9.....	381.50	379.32	380.38	388.50	380.55	380.72	379.58	379.85	381.05	383.00	382.25	381.15
10.....	381.62	379.50	380.82	387.85	380.28	379.50	379.50	380.10	382.02	383.05	382.20	381.35
11.....	381.60	379.45	381.32	386.15	380.25	379.05	379.30	380.02	*a*	383.32	382.95	381.40
12.....	381.62	379.08	381.78	385.80	380.05	378.65	379.20	380.18	*a*	383.50	382.50	381.70
13.....	380.60	378.80	382.10	385.38	382.92	378.42	379.22	380.42	*a*	383.05	382.95	383.05
14.....	380.60	378.75	381.90	383.98	382.75	378.30	379.20	380.28	*a*	382.75	381.80	383.40
15.....	380.60	378.80	381.70	383.38	382.30	378.20	379.12	380.68	*a*	382.45	382.30	382.65
16.....	380.68	378.80	381.80	383.62	381.18	378.20	379.02	380.62	*a*	383.00	382.70	383.40
17.....	380.75	378.80	382.40	384.30	380.35	378.15	379.02	380.82	*a*	383.25	383.20	383.40
18.....	380.60	378.78	384.00	384.42	380.10	378.25	379.20	380.90	*a*	383.30	381.60	383.70
19.....	379.90	378.72	382.90	384.08	379.95	378.20	379.40	380.65	*a*	383.30	382.70	383.45
20.....	379.12	378.70	381.40	384.52	379.75	378.20	379.80	380.52	*a*	382.15	381.95	383.65
21.....	379.00	378.70	380.92	386.12	379.38	378.28	379.52	381.08	*a*	382.90	382.30	383.65
22.....	379.00	378.80	380.55	385.55	379.30	378.70	379.72	380.45	*a*	382.50	382.40	383.55
23.....	379.00	378.85	380.35	383.80	379.20	379.80	380.30	379.50	*a*	382.55	382.50	383.50
24.....	379.00	378.85	380.22	383.35	379.30	379.92	381.00	379.65	*a*	382.75	382.10	383.80
25.....	379.08	378.85	380.75	381.58	379.28	379.90	381.12	380.75	*a*	382.25	381.90	384.00
26.....	379.15	378.85	384.58	382.75	379.38	379.85	381.15	380.40	*a*	379.50	382.30	384.05
27.....	379.25	378.80	388.90	383.50	379.18	379.98	380.55	379.58	*a*	378.40	382.70	383.50
28.....	379.68	378.85	390.95	382.32	378.95	379.15	381.00	379.88	*a*	378.50	382.95	383.40
29.....	381.08	......	390.38	381.85	379.32	379.10	380.72	380.75	*a*	381.05	382.00	382.75
30.....	383.35	......	389.05	382.22	379.88	379.30	380.90	382.35	*a*	381.65	381.75	379.70
31.....	383.50	......	388.12	......	378.60	......	381.08	380.52	......	381.50	......	379.55

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River at Genesee Street Bridge, Utica

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	396.00	397.60	396.90	401.15	398.75	395.00	395.10	395.00	394.75	394.00	394.60	394.80
2......	396.05	397.60	396.90	401.45	398.10	395.00	395.10	395.00	394.60	394.00	394.60	394.90
3......	396.10	397.60	396.90	401.85	397.85	395.00	395.10	395.00	394.60	394.00	394.60	394.90
4......	396.15	397.45	397.00	401.25	397.65	395.15	395.10	395.00	394.50	394.00	394.60	394.80
5......	396.20	397.15	397.00	399.60	397.85	395.20	395.10	395.00	394.50	394.15	394.60	394.80
6......	396.10	396.95	396.90	398.70	397.90	395.20	395.10	394.80	394.50	394.50	394.60	394.80
7......	396.10	396.80	396.80	399.00	397.75	395.15	395.15	394.80	394.60	394.50	394.60	394.80
8......	396.10	396.75	396.80	399.25	397.60	395.25	395.45	394.80	394.55	394.70	394.60	394.85
9......	396.40	396.65	396.70	399.65	397.50	395.40	395.40	394.70	394.50	394.75	394.60	394.90
10......	396.60	396.60	396.70	400.40	397.50	395.35	395.30	394.60	394.45	394.90	394.70	394.90
11......	396.55	396.60	396.70	401.10	397.35	395.30	395.30	394.45	394.40	394.90	394.70	395.00
12......	396.50	396.50	396.80	410.10	397.30	395.30	395.25	394.20	394.40	394.90	394.70	395.00
13......	396.40	396.50	396.80	400.35	397.60	395.20	395.10	393.90	394.35	394.90	394.70	395.00
14......	396.40	396.60	396.90	399.95	398.10	395.10	395.10	393.70	394.30	394.90	394.80	395.10
15......	396.35	396.65	396.90	399.90	397.80	395.10	395.00	393.60	394.30	394.80	394.80	395.10
16......	396.30	396.70	397.00	399.95	397.30	395.10	395.00	393.50	394.30	394.80	394.95	395.10
17......	396.30	396.70	397.00	400.00	396.95	395.10	395.00	393.50	394.30	394.90	395.05	395.05
18......	396.30	396.80	397.00	400.00	396.90	395.10	395.00	393.80	394.20	394.90	395.10	395.00
19......	396.30	396.80	396.95	400.05	396.80	395.15	395.00	394.15	394.20	394.90	395.10	395.00
20......	396.30	396.70	396.90	400.70	396.70	395.30	395.00	394.95	394.10	394.90	395.10	395.10
21......	396.30	396.60	396.80	401.05	396.55	395.20	395.00	395.25	394.10	394.90	395.20	395.25
22......	396.30	396.60	396.80	401.25	396.45	395.10	395.00	395.35	394.00	394.80	395.25	395.30
23......	396.35	396.60	396.90	400.75	396.40	395.10	395.00	394.85	394.00	394.80	395.15	395.30
24......	396.45	396.60	397.00	399.85	396.20	395.10	395.05	394.60	394.05	394.80	395.05	395.35
25......	396.35	396.60	397.35	399.10	395.35	395.10	395.10	394.80	394.10	394.80	395.00	395.40
26......	396.35	396.65	398.20	399.35	395.00	395.00	395.10	394.55	394.10	394.70	395.00	395.40
27......	396.45	396.80	400.80	399.55	395.10	395.00	395.10	394.35	394.10	394.70	394.95	395.30
28......	396.65	396.90	402.40	399.50	395.10	395.00	395.05	394.65	394.10	394.70	394.90	395.30
29......	397.00	......	401.90	399.00	395.05	395.00	395.00	395.20	394.00	394.70	394.90	395.30
30......	397.35	......	401.35	399.10	395.00	395.10	395.00	395.65	394.00	394.70	394.80	395.40
31......	397.70	......	401.05	......	395.00	......	395.00	395.25	......	394.70	......	395.40

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River below State Dam at Rome

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	426.66	426.66	426.46	427.86	427.56	*M*	*M*	*M*	*M*	426.46	426.96	426.96
2.....	426.66	426.66	426.46	427.86	427.66	......	......	......	......	426.46	426.96	427.06
3.....	426.66	426.66	426.46	427.86	427.46	......	......	......	......	426.46	427.06	426.96
4.....	426.66	426.66	426.46	427.76	427.46	......	......	......	......	426.46	427.06	427.06
5.....	426.66	426.66	426.66	427.76	427.46	......	......	......	......	426.56	426.96	427.16
6.....	426.66	426.66	426.66	427.66	427.56	......	......	......	......	426.56	427.06	427.06
7.....	426.66	426.66	426.66	427.66	427.66	......	......	......	......	426.66	427.06	427.16
8.....	426.66	426.66	426.86	427.86	427.76	......	......	......	......	426.66	427.06	427.16
9.....	426.66	426.66	427.06	428.96	427.66	......	......	......	......	426.66	427.06	427.06
10.....	426.66	426.66	427.06	429.26	427.46	426.66	......	......	......	426.86	427.06	427.06
11.....	426.66	426.66	427.26	429.06	427.36	426.66	......	......	......	426.86	427.06	427.06
12.....	426.66	426.66	428.46	428.46	426.66	......	......	......	......	426.86	427.06	427.06
13.....	426.66	426.66	428.46	428.56	427.46	......	......	......	......	426.86	427.06	427.06
14.....	426.66	426.66	428.46	428.46	427.46	......	......	......	......	426.86	427.06	427.06
15.....	426.66	426.46	428.46	428.26	427.46	......	......	......	......	426.96	426.96	427.06
16.....	426.66	426.46	428.46	428.66	427.46	......	......	......	......	426.96	426.96	426.96
17.....	426.66	426.46	428.46	429.26	427.46	......	......	......	......	426.96	427.06	427.06
18.....	426.66	426.46	428.86	429.16	427.46	......	......	......	......	426.96	427.06	427.06
19.....	426.66	426.46	427.46	428.66	427.36	......	......	......	......	426.96	426.96	427.16
20.....	426.66	426.46	427.46	429.26	426.66	......	......	......	......	426.86	426.96	427.06
21.....	426.66	426.46	427.46	429.46	426.66	......	......	......	......	427.26	426.96	426.96
22.....	426.66	426.46	427.46	428.66	426.46	......	......	......	......	427.26	426.96	427.06
23.....	426.66	426.46	427.46	428.66	426.46	......	......	......	......	427.26	426.96	427.06
24.....	426.66	426.46	427.46	428.16	426.46	......	......	......	......	427.06	426.86	427.06
25.....	426.66	426.46	427.46	427.26	426.46	......	......	......	......	426.96	426.86	426.96
26.....	426.66	426.46	427.46	427.26	426.46	......	......	......	......	426.86	426.96	426.96
27.....	426.66	426.46	427.76	427.46	426.46	......	......	......	......	427.06	426.76	427.16
28.....	426.66	426.46	427.96	427.36	426.46	......	......	......	......	426.96	426.86	427.26
29.....	426.66	......	427.96	427.36	426.46	......	......	......	......	426.96	426.66	427.36
30.....	426.66	......	427.96	427.46	426.46	......	......	......	......	427.06	426.66	427.46
31.....	426.66	......	427.86	......	426.46	......	......	......	......	427.06	......	427.46

M Flow through feeder. Water-surface below gage, except as shown. No water at location of gage.

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River above State Dam at Rome

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	431.93	431.93	431.73	432.33	432.43	431.63	430.73	431.73	431.73	431.13	431.23	431.73
2......	431.93	431.93	431.73	432.33	432.43	431.63	430.73	431.73	431.73	430.93	431.33	431.73
3......	431.93	431.93	431.73	432.33	432.23	431.53	430.73	431.73	431.73	430.93	431.33	431.83
4......	431.93	431.93	431.73	432.23	432.23	431.53	430.73	431.73	431.73	430.93	431.33	431.83
5......	431.93	431.93	432.13	432.23	432.13	431.53	430.73	431.73	431.73	430.93	431.23	431.83
6......	431.93	431.93	432.13	432.13	432.23	431.53	430.73	431.53	431.73	430.93	431.33	432.13
7......	431.93	431.93	432.13	432.13	432.23	431.53	430.73	431.53	431.73	430.93	431.33	432.23
8......	431.93	431.93	432.33	432.33	432.33	431.73	430.73	431.53	431.73	430.93	431.33	432.13
9......	431.93	431.93	432.53	433.33	432.23	431.73	430.73	431.53	431.53	430.73	431.33	432.13
10......	431.93	431.93	432.53	433.33	432.23	431.93	430.93	431.53	431.53	430.73	431.23	432.13
11......	431.93	431.93	432.73	433.13	432.13	431.93	430.93	431.53	431.33	431.13	431.23	432.23
12......	431.93	431.93	433.03	432.43	431.73	431.73	430.93	431.53	431.33	431.13	431.23	432.23
13......	431.93	431.93	433.03	432.63	432.23	431.73	430.93	431.53	431.33	431.23	431.33	432.03
14......	431.93	431.93	433.03	432.53	432.23	431.53	430.93	431.53	431.33	431.23	431.43	432.13
15......	431.93	431.73	433.03	432.33	432.23	431.53	430.93	431.53	431.33	431.23	431.23	432.03
16......	431.93	431.73	433.03	432.73	432.23	431.53	430.93	431.53	431.33	431.33	431.33	432.03
17......	431.93	431.73	433.03	433.33	432.23	431.53	431.13	431.53	431.33	431.33	431.33	432.13
18......	431.93	431.73	433.23	433.23	432.23	431.53	431.13	431.73	431.33	431.23	431.33	432.13
19......	431.93	431.73	432.03	432.73	432.23	431.53	431.13	431.73	431.33	431.13	431.23	432.23
20......	431.93	431.73	432.03	433.33	431.73	431.73	431.13	431.73	431.13	431.03	431.23	432.13
21......	431.93	431.73	432.03	433.53	431.73	431.53	431.13	431.53	431.13	431.23	431.23	432.23
22......	431.93	431.73	432.03	432.73	431.73	431.53	431.13	431.53	431.13	431.13	431.23	432.13
23......	431.93	431.73	432.03	432.73	431.73	431.53	431.13	*a*	431.13	431.13	431.23	432.13
24......	431.93	431.73	432.03	432.23	431.73	431.53	431.33	431.53	431.13	431.03	431.13	432.23
25......	431.93	431.73	432.03	431.93	431.73	431.53	431.33	431.53	431.13	431.13	431.13	432.13
26......	431.93	431.73	432.03	432.13	431.73	431.53	431.33	431.53	431.33	431.03	431.23	432.13
27......	431.93	431.73	432.33	432.23	431.73	431.53	431.33	431.53	431.13	431.13	431.83	432.33
28......	431.93	......	432.43	432.23	431.73	431.53	431.73	431.53	431.13	431.13	431.83	432.53
29......	431.93	......	432.43	432.23	431.73	431.53	431.73	431.73	431.13	431.13	431.23	432.53
30......	431.93	......	432.43	432.33	431.63	431.53	431.73	431.73	431.13	431.23	431.23	432.53
31......	431.93	......	432.33	......	431.63	......	431.73	431.73	......	431.33	......	432.53

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River at Floyd Ave. Bridge, Rome

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	446.31	446.31	446.61	447.01	447.21	446.86	446.56	446.86	446.61	446.66	446.73	446.56
2......	446.31	446.31	446.61	447.13	447.09	446.86	446.56	446.81	446.61	446.66	446.76	446.59
3......	446.31	446.31	446.66	447.09	447.01	446.83	446.56	446.81	446.63	446.61	446.73	446.53
4......	446.41	446.31	446.99	447.05	447.01	446.81	446.56	446.71	446.66	446.66	446.76	446.51
5......	446.36	446.31	446.86	447.11	447.03	446.86	446.59	446.71	446.61	446.63	446.73	446.51
6......	446.36	446.31	446.83	447.06	447.11	446.83	446.61	446.66	446.61	446.61	446.71	446.46
7......	446.31	446.31	446.79	447.06	447.11	446.86	446.56	446.66	446.63	446.63	446.73	446.51
8......	446.39	446.31	447.31	447.11	447.26	447.06	446.56	446.66	446.66	446.66	446.71	446.51
9......	446.41	446.31	447.56	448.61	447.46	446.86	446.61	446.66	446.63	446.61	446.71	446.51
10......	446.41	446.31	447.86	448.56	447.46	446.81	446.56	446.63	446.61	446.61	446.76	446.46
11......	446.41	446.31	448.31	447.91	447.26	446.71	446.56	446.61	446.66	446.61	446.76	446.46
12......	446.51	446.31	448.31	447.73	447.26	446.71	446.56	446.63	446.61	446.61	446.73	446.46
13......	446.71	446.41	448.31	447.69	447.31	446.66	446.66	446.66	446.61	446.66	446.71	446.46
14......	446.71	446.41	448.31	447.51	447.31	446.66	446.66	446.69	446.63	446.61	446.76	446.46
15......	446.71	446.41	448.31	447.46	447.29	446.66	446.56	446.71	446.66	446.61	446.73	446.51
16......	446.71	446.39	448.26	447.56	447.26	446.66	446.56	446.76	446.61	446.61	446.81	446.46
17......	446.31	446.31	448.23	448.26	447.26	446.61	446.56	446.71	446.61	446.66	446.81	447.01
18......	446.31	446.36	447.96	448.19	447.29	446.56	446.56	446.71	446.61	446.66	446.83	447.01
19......	446.31	446.36	447.16	447.81	447.26	446.56	446.66	446.66	446.61	446.66	446.81	447.01
20......	446.31	446.41	446.91	447.16	447.29	446.61	446.66	446.66	446.61	446.63	446.71	447.01
21......	446.33	446.41	446.91	447.11	447.29	446.61	446.61	446.61	446.63	446.61	446.71	447.11
22......	446.33	446.41	446.91	447.06	447.26	446.59	446.61	446.66	446.63	446.61	446.71	447.46
23......	446.31	446.41	446.91	447.01	447.26	446.56	446.66	416.76	446.61	446.63	446.73	447.61
24......	446.31	446.36	446.91	447.03	447.26	446.56	446.66	446.71	446.63	446.66	446.73	447.61
25......	446.31	446.36	446.91	447.03	447.21	446.56	446.66	446.71	446.61	446.66	446.71	447.56
26......	446.31	446.30	446.99	447.06	447.21	446.56	446.66	446.66	446.66	446.63	446.71	447.41
27......	446.33	446.30	447.23	447.11	447.16	446.56	446.66	446.66	446.66	446.61	446.71	446.99
28......	446.31	446.60	447.31	446.99	447.16	446.56	446.66	446.61	446.63	446.66	446.36	447.01
29......	446.31	......	447.31	447.01	447.11	446.56	446.71	446.61	446.63	446.66	446.01	447.01
30......	446.31	......	447.16	447.06	446.86	446.56	446.81	446.66	446.66	446.66	446.11	446.99
31......	446.31	......	447.06	......	446.86	......	446.86	446.63	.....	446.71	......	447.01

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River below Dam at Ridge Mills

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	458.90	458.90	459.30	459.60	459.80	459.30	459.20	459.40	459.30	459.30	459.30	459.10
2......	458.90	458.90	459.30	459.80	459.80	459.40	459.20	459.20	459.30	459.30	459.30	459.20
3......	458.90	458.90	459.90	459.70	459.60	459.40	459.20	459.30	459.30	459.30	459.30	459.20
4......	458.90	458.90	459.90	459.60	459.60	459.40	459.20	459.30	459.30	459.30	459.30	459.00
5......	458.90	458.90	459.40	459.60	459.60	459.40	459.20	459.30	459.30	459.30	459.30	459.10
6......	458.90	458.90	459.40	459.60	459.70	459.40	459.20	459.00	459.30	459.30	459.30	459.10
7......	458.90	458.90	459.40	459.60	459.80	459.50	459.20	459.20	459.30	459.30	459.40	459.10
8......	458.90	458.90	460.10	459.70	459.80	459.50	459.20	459.20	459.30	459.30	459.30	459.10
9......	458.90	458.90	460.10	461.00	459.80	459.40	459.30	459.30	459.30	459.30	459.40	459.10
10......	458.90	458.90	460.40	461.00	459.80	459.40	459.30	459.30	459.30	459.30	459.30	459.10
11......	458.90	458.90	460.40	460.70	459.80	459.30	459.30	459.30	459.30	459.30	459.30	459.10
12......	458.90	458.90	460.80	460.40	459.80	459.20	459.30	459.30	459.30	459.30	459.30	459.10
13......	458.90	458.90	460.80	460.40	459.80	459.20	459.30	459.30	459.30	459.30	459.30	459.10
14......	458.90	458.90	460.80	459.90	459.80	459.20	459.30	459.30	459.30	459.30	459.30	459.10
15......	458.90	458.90	460.90	459.90	459.80	459.20	459.30	459.30	459.30	459.30	459.30	459.10
16......	458.90	458.90	460.90	460.60	459.80	459.20	459.30	459.30	459.30	459.30	459.40	459.10
17......	458.90	458.90	460.80	460.80	459.80	459.20	459.30	459.40	459.30	459.30	459.30	459.10
18......	458.90	458.90	460.80	460.70	459.80	459.20	459.30	459.30	459.30	459.30	459.30	459.10
19......	458.90	458.90	459.50	460.80	459.80	459.20	459.30	459.30	459.10	459.30	459.30	459.10
20......	458.90	458.90	459.50	460.80	459.80	459.20	459.30	459.30	459.10	459.30	459.30	459.10
21......	458.90	458.90	459.50	461.00	459.70	459.20	459.30	459.30	459.20	459.30	459.30	459.00
22......	458.90	458.90	459.50	460.50	459.70	459.20	459.30	459.30	459.20	459.40	459.30	459.00
23......	458.90	458.90	459.50	460.30	459.70	459.20	459.30	459.30	459.20	459.50	459.30	459.00
24......	458.90	458.90	459.50	459.50	459.70	459.20	459.30	459.30	459.20	459.30	459.30	459.60
25......	458.90	458.90	459.50	459.40	459.70	459.30	459.30	459.30	459.20	459.30	459.30	459.60
26......	458.90	458.90	459.50	459.40	459.70	459.30	459.30	459.30	459.20	459.30	459.40	459.60
27......	458.90	458.90	459.90	459.40	459.70	459.20	459.30	459.30	459.30	459.30	459.30	459.60
28......	458.90	459.30	459.70	459.50	459.50	459.20	459.30	459.30	459.30	459.30	459.30	459.60
29......	458.90	......	459.70	459.50	459.50	459.20	459.40	459.40	459.30	459.30	458.30	459.60
30......	459.00	......	459.60	459.80	459.40	459.20	459.40	*a*	459.30	459.30	458.20	459.60
31......	458.90	......	459.60	......	459.30	......	459.40	*a*	......	459.30	......	459.60

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Mohawk River above Dam at Ridge Mills

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	465.82	465.82	466.12	466.42	466.62	466.12	465.92	466.22	466.02	466.02	466.12	465.92
2......	465.82	465.82	466.12	466.62	466.62	466.22	465.92	466.22	466.02	466.02	466.12	466.02
3......	465.82	465.82	466.62	466.52	466.32	466.22	465.92	466.12	466.02	466.02	466.12	466.02
4......	465.82	465.82	466.62	466.42	466.32	466.22	465.92	466.02	466.02	466.02	466.02	465.92
5......	465.82	465.82	466.22	466.42	466.42	466.22	465.92	466.02	466.02	466.02	466.02	465.92
6......	465.82	465.82	466.22	466.42	466.42	466.22	465.92	465.82	466.02	466.02	466.02	465.92
7......	465.82	465.82	466.22	466.42	466.42	466.32	465.92	465.92	466.02	466.02	466.12	465.92
8......	465.82	465.82	466.82	466.52	466.42	466.32	465.92	465.92	466.02	466.02	466.02	465.92
9......	465.82	465.82	466.82	467.52	466.52	466.22	466.02	466.02	466.02	466.02	466.12	465.92
10......	465.82	465.82	467.02	467.52	466.52	466.22	466.02	466.02	466.02	466.02	466.12	465.92
11......	465.82	465.82	467.02	467.72	466.52	466.12	466.02	466.02	466.02	466.02	466.12	465.92
12......	465.82	465.82	467.32	466.92	466.52	466.02	466.02	466.02	466.02	466.02	466.12	465.92
13......	465.82	465.82	467.32	466.92	466.52	466.02	466.02	466.02	466.02	466.02	466.02	465.92
14......	465.82	465.82	467.32	466.72	466.52	466.02	466.02	466.02	466.02	466.02	466.12	465.92
15......	465.82	465.82	467.32	466.72	466.52	466.02	466.02	466.02	466.02	466.02	466.12	465.92
16......	465.82	465.82	467.32	467.12	466.52	466.02	466.02	466.02	466.02	466.02	466.22	465.92
17......	465.82	465.82	467.22	467.42	466.52	466.02	466.02	466.12	466.02	466.02	466.12	465.92
18......	465.82	465.82	467.22	467.22	466.52	466.02	466.02	466.02	466.02	466.02	466.12	465.92
19......	465.82	465.82	466.32	466.92	466.52	466.02	466.02	466.02	465.92	466.02	466.12	465.92
20......	465.82	465.82	466.32	466.92	466.52	466.02	466.02	466.02	465.92	466.02	466.12	465.92
21......	465.82	465.82	466.32	467.62	466.52	466.02	466.02	466.02	465.92	466.02	466.12	465.82
22......	465.82	465.82	466.32	467.12	466.42	466.02	466.02	466.02	465.92	466.22	466.12	465.82
23......	465.82	465.82	466.32	466.92	466.42	466.02	466.02	466.02	465.92	466.32	466.12	465.92
24......	465.82	465.82	466.32	466.32	466.42	466.02	466.02	466.02	465.92	*a*	466.12	466.32
25......	465.82	465.82	466.32	466.22	466.42	466.12	466.02	466.02	465.92	466.12	466.12	466.32
26......	465.82	465.82	466.32	466.22	466.42	466.12	466.02	466.02	465.92	466.12	466.22	466.32
27......	465.82	465.82	466.62	466.32	466.42	466.02	466.02	466.02	466.02	466.12	466.12	466.32
28......	465.82	466.12	466.52	466.42	466.42	466.02	466.02	466.02	466.02	466.12	466.12	466.32
29......	465.82	......	466.52	466.22	466.42	466.02	466.12	466.12	466.02	466.12	465.22	466.32
30......	465.92	......	466.42	466.62	466.22	465.92	466.22	466.02	466.02	466.12	465.22	466.32
31......	465.82	......	466.42	......	466.12	......	466.22	466.02	......	466.12	......	466.32

a No record.

Daily Elevation of Water-surface (B. C. Datum) of Delta Reservoir at Delta Dam

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	542.40	543.95	545.20	544.20	548.20	542.90	541.90	539.45	539.70	538.70	536.70	540.30
2.....	542.40	544.10	545.10	545.90	548.00	542.80	541.90	539.30	539.70	538.60	536.70	541.00
3.....	542.40	544.25	544.95	546.85	547.90	542.70	541.80	539.15	540.10	538.55	536.65	541.60
4.....	542.45	544.45	544.75	547.20	547.80	542.60	541.80	539.05	540.20	538.45	536.60	541.80
5.....	542.50	544.80	544.55	547.35	548.05	542.55	541.80	538.85	540.20	538.35	536.60	541.80
6.....	542.50	544.90	544.35	547.40	548.20	542.50	541.90	538.80	540.20	538.25	536.70	541.80
7.....	542.50	545.05	544.15	547.50	548.15	542.40	541.90	538.70	540.30	538.10	536.70	541.85
8.....	542.50	545.10	543.85	548.20	547.95	542.75	541.90	538.60	540.30	538.00	536.75	541.90
9.....	542.55	545.20	543.15	548.65	547.75	543.00	541.80	538.45	540.30	537.95	536.80	541.90
10.....	542.60	545.20	542.65	548.10	547.55	542.95	541.70	538.30	540.30	537.90	536.80	541.90
11.....	542.60	545.20	541.70	547.75	547.30	542.90	541.70	538.15	540.30	537.80	536.80	541.90
12.....	542.60	545.30	540.00	548.00	547.05	542.90	541.65	538.05	540.25	537.75	536.90	541.85
13.....	542.60	545.30	538.80	548.00	547.40	542.75	541.60	533.00	540.20	537.70	536.95	541.80
14.....	542.50	545.30	538.50	547.90	547.40	542.65	541.55	537.90	540.10	537.60	537.15	541.80
15.....	542.50	545.30	536.10	548.00	547.25	542.60	541.50	537.75	540.00	537.55	537.30	541.80
16.....	542.50	545.30	535.20	548.35	547.05	542.50	541.40	537.60	539.90	537.50	537.70	541.80
17.....	542.50	545.40	533.80	548.40	546.85	542.45	541.30	537.50	539.80	537.50	538.15	541.80
18.....	542.50	545.45	532.80	548.25	546.55	542.40	541.20	537.50	539.70	537.55	538.30	541.80
19.....	542.50	545.50	532.45	548.10	546.20	542.30	541.10	537.40	539.60	537.60	538.40	541.80
20.....	542.50	545.50	532.50	548.35	545.85	542.25	541.00	537.30	539.55	537.60	538.45	541.75
21.....	542.50	545.50	532.35	548.20	545.55	542.20	540.90	537.45	539.50	537.60	538.50	541.70
22.....	542.50	545.60	532.20	547.80	545.35	542.10	540.90	537.50	539.40	537.45	538.50	541.60
23.....	542.50	545.60	531.75	547.55	545.10	542.05	540.80	537.50	539.35	537.35	538.50	541.60
24.....	542.60	545.60	531.55	547.50	544.85	541.95	540.70	537.65	539.30	537.20	538.45	541.25
25.....	542.60	545.60	531.25	547.50	544.55	541.90	540.60	537.80	539.20	537.15	538.40	540.90
26.....	542.60	545.60	531.35	547.65	544.35	541.85	540.50	537.70	539.10	537.10	538.55	540.60
27.....	542.60	545.60	533.20	547.90	544.15	541.80	540.40	537.60	539.00	537.10	538.90	540.35
28.....	542.65	545.60	537.00	548.00	544.35	541.75	540.25	537.70	538.90	537.00	539.35	540.15
29.....	542.90	......	539.75	548.00	543.55	541.80	540.05	538.40	538.80	536.90	539.65	539.95
30.....	543.25	......	541.75	548.15	543.35	541.85	539.85	539.50	538.75	536.85	539.85	539.80
31.....	543.60	......	542.85	......	543.05	......	539.65	539.70	......	536.80	......	539.75

MOHAWK RIVER DISCHARGE RECORDS

MOHAWK RIVER AT VISCHER'S FERRY DAM

Location.— At the Vischer's Ferry dam about 7 miles below Schenectady and 10 miles above the mouth of the river at Cohoes, replacing the station at Vischer's Ferry about 1 mile below the dam.

Records available.— June 24, 1913, to December 31, 1914.

Drainage area. — 3,400 square miles. (Measured on U. S. Geological Survey topographic sheets.) Used by U. S. Geological Survey. 3,406 square miles, as determined by Department of State Engineer and Surveyor.

Gage.— Gurley weight-driven printing gage set over float well in the northwest corner of the basin above the dam. The gage records the actual head of water on the rest of the spillway.

Discharge measurements.— Made by wading below the dam at low water. No provision for measurements at medium and high stages.

Diversions.— Water is diverted into the Erie canal at the temporary lock in the north end of the dam and the gage recording the head of the spillway makes no record of the water passing into the canal. Occasional measurements of the flow in this canal have been made at bridge No. 48, about 1 mile downstream, which are listed below.

Accuracy.— Conditions are fairly good for wading measurements and the estimates for low stages are good.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Mohawk River at Vischer's Ferry

DATE	Made by	GAGE HEIGHT		Discharge
		Recording	Slope	
1914			*Feet*	*Sec.-ft.*
Jan. 21 [a]	R. S. Barnes	0.475	3.74	1,920
Mar. 2 [b]	De Golyer and Easterly	0.510	4.60	1,670
16 [c]	De Golyer and Easterly	0.670	4.48	2,880
June 15 [d]	Hartwell and Barnes	0.438	3.14	1,260
Aug. 24 [e]	Hartwell and Barnes	0.494	....	1,830
Sept. 9 [e]	Hartwell and Adams	0.467	3.20	1,630
15 [f]	Pierce and Adams	0.290	2.70	601
24 [g]	Hartwell, Barnes and Adams	0.261	2.74	645
Oct. 7 [h]	Hartwell, Adams, Barnes and James	0.213	....	446
26 [i]	C. S. De Golyer and R. S. Barnes	0.343	....	904

[a] Measurement made through ice about 200 feet below slope gage.
[b] Measurement made through ice at slope gage.
[c] Measurement made through ice ¾ mile below slope gage.
[d] Measurement made by wading about 2,500 feet above slope gage.
[e] Measurement made by wading about 1,000 feet below dam gage.
[f] Measurement made by wading about 6,000 feet below dam gage.
[g] Measurement made by wading about 8,000 feet below dam gage.
[h] Measurement made by wading about 1,000 feet above slope gage.
[i] Measurement made by wading 8,000 feet below dam gage.

Current-meter Discharge Measurements of Erie Canal at Vischer's Ferry Dam

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
June 15	M. J. Maguire	1.60	349
22	M. J. Maguire	1.54	437
29	M. J. Maguire	1.81	399
July 6	M. J. Maguire	1.44	308
13	M. J. Maguire	1.66	420
20	M. J. Maguire	1.59	417
27	M. J. Maguire	1.87	543
27	M. J. Maguire	1.66	378
Aug. 3	M. J. Maguire	2.10	302
10	M. J. Maguire	1.38	412
17	M. J. Maguire	1.66	422
24	M. J. Maguire	1.30	360
31	M. J. Maguire	1.56	336
Sept. 7	M. J. Maguire	1.76	428
13	M. J. Maguire	1.50	418
24	R. S. Barnes	1.48	350
Oct. 7	Adams and James	1.67	421
19	Adams	1.61	327
26 [a]	Adams and Hartwell	1.99	418
Nov. 25 [a]	H. W. Fear	1.20	289

[a] Measurement made from bridge No. 48.

For elevations of water-surface above Vischer's Ferry dam obtained by converting gage heights to Barge canal datum, see table on page 273.

Daily Gage Height, in Feet, of Mohawk River at Vischer's Ferry Dam and Vischer's Ferry

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.54	1.40	......	15.50	13.95	3.09	0.30	0.25	0.72	0.23	0.24	......
2	.50	1.34	0.51	15.60	13.90	3.08	.34	.24	.58	.22	.23	0.89
3	.48	1.15	......	15.20	13.50	.42	.35	.25	.55	.23	.24	......
4	.48	1.09	......	14.80	13.40	.46	.33	.26	.63	.24	.24	......
5	.49	1.05	......	14.20	13.55	.42	.31	.26	.60	.24	.26	.81
6	.48	1.06	......	14.00	13.40	.40	.30	.26	.52	.23	.31	......
7	.47	1.08	......	13.80	13.60	.44	.35	.25	.41	.24	.35	......
8	.48	1.03	......	13.90	13.85	.50	.39	.25	.41	.26	.31	......
9	.49	.94	......	16.20	13.75	.53	.40	.24	.48	.25	.23	......
10	.49	.87	......	15.10	13.60	.61	.42	.25	.43	.26	.25	......
11	.44	.82	......	14.70	13.60	.53	.42	.25	.42	.25	.37	.52
12	.49	.73	......	14.50	13.70	.49	.51	.23	.30	.22	.33	.52
13	.39	.69	......	14.60	13.80	.48	.46	.23	.24	.22	.31	......
14	......	.70	......	14.10	13.90	.40	.35	.24	.24	.23	.34	.41
15	......	.68	......	14.00	13.75	.42	.38	.22	.29	.24	.33	.36
16	......	.61	.67	14.20	13.45	.35	.36	.21	.32	.27	.38	.73
17	......	.55	......	14.20	13.25	.33	.40	.20	.31	.28	.58	......
18	......	......	......	14.30	13.00	.28	.39	......	.29	.27	.59	.57
19	......	......	......	14.40	12.90	.26	.26	......	.30	.39	......	.55
20	......	......	......	15.10	12.80	.24	.27	......	.32	.48	......	......
21	.48	......	......	16.00	12.80	.29	.27	......	.29	.37	......	......
22	.48	......	......	14.90	12.70	.28	.27	......	.26	.36	......	.44
23	.49	......	......	14.50	12.70	.28	.28	......	.28	.32	......	......
24	.52	......	......	14.10	3.35	.27	.28	.45	.28	.34	.54	.45
25	.51	......	......	14.00	3.04	.25	.28	......	.26	.34	.45	.43
26	.50	......	......	14.20	3.26	.27	.26	......	.26	.34	......	.41
27	.54	......	......	14.00	3.23	.31	.27	......	.27	.30	......	.42
28	.59	......	......	13.75	3.26	.33	.27	......	.26	.32	......	.44
29	.65	......	......	14.20	3.20	.40	.28	......	.25	.32	......	.44
30	.84	......	15.90	14.10	3.29	.32	.28	......	.23	.27	......	......
31	1.27	......	15.30	......	3.05	......	.28	......	......	.21	......	.50

NOTE.— Gage height observed as follows: May 24 to June 2, from sloping staff gage at Vischer's Ferry; March 30 to May 23, inclusive, from gage in concrete at lock; January 1 to February 17 and June 3 to December 31, inclusive, from automatic gage above the dam. Gage height record from February 18 to March 29 lost when gage was carried out by ice.

Daily Discharge, in Second-feet, of Mohawk River at Vischer's Ferry Dam

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2,130	10,100	......	39,200	15,600	1,370	710	510	3,520	440	470	......
2	1,850	9,440	1,670	41,000	14,900	1,340	900	470	2,410	410	440	5,010
3	1,710	7,500	......	34,100	10,100	1,340	950	510	2,200	440	470	......
4	1,710	6,900	......	27,600	9,000	1,580	850	550	2,800	470	470	......
5	1,780	6,500	......	18,900	10,600	1,340	750	550	2,560	470	550	4,290
6	1,710	6,600	......	16,200	9,000	1,220	710	550	1,990	440	750	......
7	1,640	6,800	......	13,600	11,200	1,460	950	510	1,280	470	950	......
8	1,710	6,300	......	14,900	14,200	1,850	1,160	510	1,280	550	750	......
9	1,780	5,460	......	52,100	13,000	2,060	1,220	470	1,710	510	440	......
10	1,780	4,830	......	32,400	11,200	2,640	1,340	510	1,400	550	510	......
11	1,460	4,380	......	26,100	11,200	2,060	1,340	510	1,340	510	1,050	1,990
12	1,780	3,600	......	23,100	12,400	1,780	1,920	440	710	410	850	1,990
13	1,160	3,280	......	24,600	13,600	1,710	1,580	440	470	410	750	......
14	......	3,360	......	17,500	14,900	1,220	950	470	470	440	900	1,280
15	......	3,200	......	16,200	13,000	1,340	1,100	410	670	470	850	1,000
16	......	2,640	2,880	18,900	9,600	950	1,000	380	800	590	1,100	3,600
17	......	2,200	......	18,900	7,500	850	1,220	350	750	630	2,410	......
18	......	......	......	20,300	5,100	630	1,160	......	670	590	2,480	2,340
19	......	......	......	21,700	4,200	550	550	......	710	1,160	......	2,200
20	......	......	......	32,400	3,360	470	590	......	800	1,710	......	......
21	1,710	......	......	48,300	3,360	670	590	......	670	1,050	......	......
22	1,710	......	......	29,200	2,560	630	590	......	550	1,000	......	1,460
23	1,780	......	......	23,100	2,560	630	630	......	630	800	......	......
24	1,990	......	......	17,500	2,040	590	630	1,520	630	900	......	1,520
25	1,920	......	......	16,200	1,250	510	630	......	550	900	......	1,400
26	1,850	......	......	18,900	1,800	590	550	......	550	900	......	1,280
27	2,130	......	......	16,200	1,720	750	590	......	590	710	......	1,340
28	2,480	......	......	13,000	1,800	850	590	......	550	800	......	1,460
29	2,960	......	......	18,900	1,640	1,220	630	......	510	800	......	1,460
30	4,560	......	46,400	17,500	1,870	800	630	......	440	590	......	......
31	8,700	......	35,800	......	1,270	......	630	......	......	380	......	1,850
Mean	2,130	3,910	8,000	24,300	7,280	1,170	892	891	1,140	661	1,170	2,400

NOTE.—Daily discharge, May 24 to June 2, determined from a well-defined rating curve. Rating curve applicable to remainder of the period, fairly well defined below discharge of 2,500 second-feet. Rating was extended above this point by the use of theoretic formulas.

Monthly Discharge of Mohawk River at Vischer's Ferry Dam
[Drainage area, 3,400 square miles]

1914	Discharge in Second-feet			Accuracy
	Maximum	Minimum	Mean	
January	8,700	1,160	2,130	B
February	10,100	....	3,910	C
March	....	....	8,000	D
April	52,100	13,000	24,300	C
May	15,600	1,270	7,280	B
June	2,640	470	1,170	A
July	1,920	550	892	A
August	....	....	891	B
September	3,520	440	1,140	A
October	1,710	380	661	B
November	....	440	1,170	D
December	....	....	2,400	D

NOTE.— These figures indicate only the flow over the spillway. Estimated mean daily discharge, November 19 to 30, inclusive, 1,580 second-feet.

MOHAWK RIVER AT TRIBES HILL

This gaging station, which is located at the suspension bridge over the Mohawk river between Fort Hunter and Tribes Hill, about 1,000 feet below the junction of the mouth of Schoharie creek, was established April 3, 1904, by this Department in coöperation with the U. S. Weather Bureau, but is now maintained by this Department alone.

The operation of the movable dam at Amsterdam, installed in connection with the canalization of the river for the Barge canal, has destroyed the control and discharge computations at this station have been abandoned.

MOHAWK RIVER AT LITTLE FALLS

A gaging station was established at the lower (Gilbert's) dam at Little Falls for the United States Board of Engineers on Deep Waterways in 1898. It was maintained by the U. S. Geological Survey in coöperation with this Department from 1900 to June, 1907, inclusive, when it was taken over by this Department. The dam is of masonry, having the form of a circular arc, and furnishes power for the Astoronga Knitting Mill and the mill of the Little Falls Paper Company. Records of the crest gage and run of the water-wheels at the Astoronga mill were taken by George Gressler during 1914. At the paper mill a record has been kept, beginning June 1, 1907, by C. V. Barrett.

There are three dams at Little Falls. The upper one is a State dam, diverting water for the supply of the Erie canal; the lower two are used for water-power development. The discharge record obtained at the lower dam shows the amount of water flowing downstream from Little Falls, but does not include the diversion at the State dam above the gaging station and hence does not represent the total yield from the tributary drainage area of about 1,330 square miles.

Owing to a change in the method of operating head-gates and turbines at the Astoronga mill, the former discharge relation no longer holds. The 1914 discharge at this station is not available.

MOHAWK RIVER AT FLOYD AVENUE, ROME

This station was established by this Department at Riverside bridge crossing Mohawk river near Rome, July 9, 1907. Readings are taken each morning and afternoon by G. G. Williams. A bench-mark located at the junction of the upstream wing wall and left-hand abutment is at elevation 460.80. The channel is straight for some distance upstream and downstream from the bridge. Current-meter measurements are made on the downstream side, the initial point being the face of the right-hand abutment. A crude dam or barrier of boulders has been placed across the stream a few hundred feet downstream for the purpose of raising the water-level to produce an ice pond.

Owing to ice obstruction, it is believed that the record for winter months may be excessive.

For daily water-surface elevations at this station, see page 281.

Daily Discharge, in Second-feet, of Mohawk River at Floyd Ave., Rome

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	130	130	230	465	610	370	205	370	230	255	295	205
2......	130	130	230	550	530	370	205	340	230	255	310	230
3......	130	130	255	530	465	355	205	340	242	230	295	192
4......	150	130	465	498	465	340	205	280	255	255	310	180
5......	140	130	370	530	481	370	230	280	230	242	295	180
6......	140	130	355	498	530	355	230	255	230	230	280	165
7......	130	130	340	498	530	370	205	255	242	242	295	180
8......	150	130	690	530	650	498	205	255	255	255	280	180
9......	150	130	925	1,985	835	370	230	255	242	230	280	180
10......	150	130	1,212	1,930	835	340	205	242	230	230	310	165
11......	150	130	1,660	1,260	650	280	205	230	255	230	310	165
12......	180	130	1,660	1,094	650	280	205	242	230	230	295	165
13......	280	150	1,660	1,070	690	255	255	255	230	255	280	165
14......	280	150	1,660	880	690	255	255	280	242	230	310	165
15......	280	150	1,660	835	690	255	205	280	255	230	295	180
16......	280	150	1,610	925	650	255	205	310	230	230	340	165
17......	130	130	1,585	1,610	650	230	205	280	230	255	340	465
18......	130	140	1,310	1,560	690	205	205	280	230	255	355	465
19......	130	140	570	1,165	650	205	255	255	230	255	340	465
20......	130	150	400	570	690	230	255	255	230	242	280	465
21......	135	150	400	530	690	230	230	230	242	230	280	530
22......	135	150	400	498	650	230	230	255	242	230	280	835
23......	130	150	400	465	650	205	255	310	230	242	295	970
24......	130	140	400	481	650	205	255	280	242	255	295	970
25......	130	140	400	481	610	205	255	280	230	255	280	925
26......	130	130	465	498	610	205	255	255	255	242	280	790
27......	135	130	630	530	570	205	255	255	255	230	280	465
28......	130	230	690	465	570	205	255	230	242	255	140	465
29......	130	....	690	465	530	205	280	230	242	255	95	465
30......	130	....	570	498	370	205	340	255	255	255	105	465
31......	130	....	498	....	370	....	370	242	....	280	....	465
Mean...	155	141	787	796	610	276	237	270	239	244	281	389

Monthly Discharge of Mohawk River at Floyd Ave., Rome

[Drainage area, 158 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January..........................	280	130	155	0.981	1.13
February.........................	230	130	141	0.892	0.93
March............................	1,660	230	787	4.97	5.73
April............................	1,985	465	796	5.04	5.62
May..............................	835	370	610	3.86	4.45
June.............................	498	205	276	1.75	1.95
July.............................	370	205	237	1.50	1.73
August...........................	370	230	270	1.71	1.97
September........................	255	230	239	1.51	1.68
October..........................	280	230	244	1.54	1.78
November.........................	355	95	281	1.78	1.99
December.........................	970	165	389	2.46	2.84
The year.........................	1,985	95	370	2.342	31.80

ALPLAUS KILL

ALPLAUS KILL NEAR CHARLTON

Location.—At the highway bridge about one-half mile southwest of Charlton.

Records available.— August 12, 1913, to December 31, 1914.

Drainage area.— 24.9 square miles, as determined by engineers of the New York State Conservation Commission.

Gage.— Automatic electric water-stage register in a 5 by 6-foot wooden house over a 2½ by 6-foot timber well. The well is connected with the stream by a 4-inch cast-iron water pipe. An auxiliary staff gage is located on the upstream corner of the left abutment of the bridge.

Control.— A low weir 43 feet long was constructed under the bridge between its abutments. It was built of 2-inch plank with its crest carefully planed to grade and its average height was 2.6 feet above the bed of the stream. Near the center of the weir was a notch for the low-water flow. A steel plate forms the crest of the notch.. The plate is cut to form a rectangular weir 36 inches long and 9 inches deep. In the center of this rectangular weir is a V notch, the top width being 6 inches and the angle 60 degrees.

The timber weir was carried out by the ice May 28, 1914. August 20-22, 1914, a lower concrete weir with a sharp steel crest was constructed. A notch was provided for the low flow similar to the one formerly installed, except that the rectangular weir is 0.20 foot deep in place of 9 inches deep.

Discharge measurements.— Made by wading below the weir or from the bridge at high stages. A number of measurements have been made by the volumetric method, when the flow was confined to the V notch.

Regulation.—Some diurnal fluctuation is caused by a grist-mill a short distance upstream during the spring months.

Winter flow.— The crest of the weir was kept free of ice during the winter, so that open water conditions prevailed.

Accuracy.— Measurements made at this station check values computed from theoretic formulas and estimates should be excellent.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Current-meter Discharge Measurements of Alplaus Kill near Charlton

DATE		Made by	Gage height	Discharge
1914			*Feet*	*Sec.-ft.*
Mar	25	O. W. Hartwell	a13.53	863
	25	O. W. Hartwell	a13.46	874
	25	O. W. Hartwell	a13.33	785
	29	O. W. Hartwell	a11.80	390
	29	O. W. Hartwell	a11.62	350
	29	O. W. Hartwell	a11.58	346
	29	O. W. Hartwell	a11.505	342
April	4	C. S. De Golyer	a10.70	132
	4	C. S. De Golyer	a10.75	170
May	1	O. W. Hartwell	a10.04	63
	1	O. W. Hartwell	a10.05	65
	27 *d*	R. S. Barnes	a9.56	23.6
	27 *d*	R. S. Barnes	a9.56	20.3
June	1 *e*	R. S. Barnes	a9.072	1.56
	1 *f*	R. S. Barnes	a9.065	1.67
July	23	C. H. Pierce	a8.55	0.10
	23	C. H. Pierce	a8.55	0.12
Sept.	2 *e*	R. S. Barnes	b9.55	0.55
	2 *e*	R. S. Barnes	c9.66	3.83
	2 *e*	R. S. Barnes	c9.64	2.16
Dec.	3 *g*	C. S. De Golyer	9.86	17.83
Dec.	31	R. M. Adams	9.64	0.09

a Gage height with weir in damaged condition.
b Gage height on new concrete weir before removing forms.
c Gage height on new concrete weir.
d Measurement made by wading 200 feet below gage.
e Measurement made by wading 300 feet below gage.
f Measurement made by wading 300 feet above gage.
g Measurement made by wading 20 feet below gage.

Daily Gage Height, in Feet, of Alplaus Kill near Charlton

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.05	11.66	11.03	11.40	10.07	9.09	9.15	8.79	9.56	9.27		9.80
2	10.86	11.65	11.35	12.05	9.88	9.02	9.24		9.58	9.24		9.88
3	11.06	11.72	11.37	10.95	9.75	9.00	9.26	8.80	9.56	9.26	9.39	9.81
4	10.92	11.61	11.39	10.73	9.68	9.30	9.20		9.55	9.25		9.74
5	11.09	11.61	11.44	10.73	10.09	9.35	9.05		9.51	9.22		9.70
6	10.91	11.56	11.35	10.63	10.21	9.19	9.20		9.50	9.20		9.64
7	11.07		11.33	10.39	9.51	9.11	9.42		9.48	9.23		9.72
8	11.18		11.33	11.39	9.70	9.20	9.60		9.50	9.38	9.46	9.67
9	10.91	11.38	11.31	11.31	9.68	9.22	9.36		9.56	9.27	9.51	9.69
10	11.16		11.33	10.78	9.63	9.13	9.27		9.48	9.25	9.49	9.67
11	11.14		11.36	10.64	9.56	9.05	9.20	8.80	9.50	9.28	9.48	9.66
12	11.22		11.27	10.96	9.70	8.99	9.15		9.46	9.27	9.57	9.58
13			11.24	10.54	10.73	8.95	9.06		9.29	9.25	9.48	9.57
14			11.28	10.38	10.01	8.93	9.01		9.20	9.36	9.54	9.65
15			11.25	10.39	9.76	8.91	9.06		9.18	9.29		9.76
16			11.36	10.67	9.63	8.89	8.97		9.34	9.40	9.72	9.80
17			11.54	10.63	9.56	8.88	9.02		9.45	9.54		9.86
18	10.76	11.05	11.95	10.38	9.52	8.87	8.93	8.82	9.46	9.48		9.79
19	10.75		11.70	10.33	9.50	8.87	8.88		9.45	9.59		9.79
20	10.76		11.73	11.32	9.46	8.93	8.86		9.30	9.67		9.71
21	10.80		11.66	10.95	9.44	8.90	8.85		9.16	9.65	9.61	9.65
22	10.91		11.58	10.26	9.40	8.89	8.84		9.10	9.60	9.57	9.64
23	10.83		11.54	9.95	9.38	8.87	8.85	9.44	9.08	9.49	9.52	9.64
24	10.84	11.00	11.48	9.85	9.35	8.87	8.90	9.47	9.25	9.49		9.80
25	10.94	10.98	11.47	9.78	9.33	8.86	8.85	9.41	9.43	9.47	9.70	9.72
26	10.99	10.97	11.87	10.87	9.36	8.83	8.85	9.35	9.39	9.44	9.65	
27	11.20	10.99	13.20	10.48	9.35	8.82	8.83	9.31	9.33	9.52	9.68	
28	11.31	11.00		11.12	9.25	8.92	8.80	9.42	9.42		9.78	9.74
29	11.39		11.85	10.58	9.19	9.45	8.81	9.51	9.34		9.72	9.84
30	11.47		11.38	10.74	9.23	9.31	8.81	9.66	9.25		9.69	9.71
31	11.55		11.55		9.18		8.81	9.63				9.68

NOTE.— Gage heights are means of 24 hourly gage heights for each day. Automatic gage not in operation during periods of no gage height. Timber weir carried out by ice March 28, replaced by lower concrete weir August 20–22. Gage heights on new weir, beginning August 23.

Daily Discharge, in Second-feet, of Alplaus Kill near Charlton

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	5.48	48.00	4.91	299	67.0	2.0	4.0	0.10	0.600	0.060	......	11.00
2......	3.14	46.60	13.30	459	47.0	1.0	5.9	.10	.980	.045	......	18.00
3......	5.24	57.00	14.70	206	36.0	.8	6.6	.10	.852	.055	0.149	12.00
4......	3.74	41.00	16.30	159	30.0	8.1	4.6	......	.790	.050	......	6.70
5......	5.60	41.00	20.90	154	69.0	10.0	1.3	......	.562	.037	......	4.50
6......	3.64	34.40	13.30	143	83.0	4.3	4.6	......	.510	.029	......	2.00
7......	5.36	......	11.90	108	41.0	2.4	14.0	......	.413	.041	......	5.50
8......	6.67	......	11.90	297	31.0	4.6	24.0	......	.510	.140	.327	3.10
9......	3.64	15.50	10.70	278	28.0	5.2	11.0	......	.852	.060	.562	4.00
10......	6.43	......	11.90	168	26.0	2.8	7.0	......	.413	.050	.460	3.10
11......	6.19	......	14.00	144	22.0	1.3	4.6	.10	.510	.066	.413	2.70
12......	7.15	......	8.50	202	31.0	.7	2.8	......	.327	.060	.916	0.980
13......	......	......	7.41	129	159.0	.5	1.5	......	.072	.050	.413	.916
14......	......	......	9.00	106	60.0	.4	.9	......	.029	.055	.730	2.40
15......	......	......	7.54	108	36.0	.3	1.5	......	.023	.072	......	8.00
16......	......	......	14.00	150	26.0	.2	.6	......	.106	.159	5.50	11.00
17......	......	......	33.20	143	22.0	.2	1.0	......	.288	.730	......	16.00
18......	2.21	5.13	101.00	106	19.0	.1	.4	.10	.327	.413	......	10.00
19......	2.13	......	54.00	99	18.0	.1	.2	......	.288	1.05	......	10.00
20......	2.21	......	58.50	281	16.0	.4	.1	......	.078	3.10	......	5.00
21......	2.57	......	48.00	206	15.0	.2	.1	......	.017	2.40	1.19	2.40
22......	3.64	......	37.00	90	13.0	.2	.1	......	.006	1.12	.916	2.00
23......	2.84	......	32.00	57	12.0	.1	.1	.16	.004	.460	.616	2.00
24......	2.94	4.58	25.10	46	10.0	.1	.2	.21	.050	.460	......	11.00
25......	3.94	4.36	24.00	40	9.4	.1	.1	.13	.217	.369	4.50	5.50
26......	4.47	4.25	81.30	184	11.0	.1	.1	.07	.149	.251	2.40	......
27......	6.91	4.47	325.00	120	10.0	.1	.1	.06	.099	.616	3.50	......
28......	10.7	4.58	780.00	235	6.2	.3	.1	.14	.190	......	9.40	......
29......	16.3	......	408.00	135	4.3	15.0	.1	.36	.106	......	5.50	......
30......	24.0	......	294.00	161	5.5	8.5	.1	1.24	.050	......	4.00	......
31......	33.2	......	335.00	......	4.0	......	.1	1.03	......	......	......	......
Mean...	6.46	16.50	91.20	167.0	31.2	2.3	3.2	0.132	0.314	0.437	3.30	5.66

NOTE.— Four rating tables used as follows: Timber weir in good condition, January 1 to March 27, inclusive; timber weir as damaged by ice, March 29 to August 19, inclusive; concrete weir with concrete forms. August 23 to September 1; concrete weir in final condition September 2 to 30.

Discharge relation affected by ice about December 26 to 31; mean daily discharge estimated, 2.6 second-feet.

Monthly Discharge of Alplaus Kill near Charlton

[Drainage area, 24.9 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January....................	33.2	....	6.46	0.259	0.30	B
February....................	57.0	....	16.5	0.663	0.69	B
March....................	780.0	4.91	91.2	3.66	4.22	A
April....................	459.0	40.0	167.0	6.71	7.49	A
May....................	159.0	4.0	31.2	1.25	1.44	A
June....................	15.0	0.1	2.3	0.092	0.10	B
July....................	24.0	0.1	3.2	0.129	0.15	B
August....................	1.24	0.0	0.132	0.005	0.01	C
September....................	0.980	0.004	0.314	0.013	0.01	A
October....................	3.1	0.29	0.437	0.018	0.02	A
November....................	....	....	3.30	0.133	0.15	B
December....................	18	....	5.66	0.227	0.26	B
The year....................	780	0	27.22	1.09	14.84	

NOTE.— Mean discharge for periods where no daily values are available is estimated.

SCHOHARIE CREEK

DESCRIPTION OF BASIN

The source of Schoharie creek is about two miles east of Tannersville, at an elevation of 1,940 feet. The source is within about four miles of the easterly escarpment of the Catskill plateau. The stream valley is broad and the slope moderate throughout the upper regions. A small area, which apparently was formerly tributary to Schoharie creek, has been cut off by erosion and has thus become tributary to Kaaterskill. Nearly the entire drainage basin is irregular and precipitous. It is extensively covered with second-growth forests.

The basin of Schoharie creek is largely overlaid by slaty rocks, into which water percolates only to a slight depth. The valley soil is largely thin plastic clay, formed by disintegration of the native rocks. Passing from the headwaters toward the mouth, Schoharie creek crosses successively the Devonian sedimentary rocks, chiefly of the Catskill, Oneonta, Ithaca and Hamilton formations. All of these may be considered fairly impervious and free from fissures. It then crosses belts of Silurian formations, including Helderberg, Salina, Niagara and Medina sandstone and limestone. These rocks are underlaid by impervious Hudson river shales, but are themselves permeable, yielding numerous springs at the lower partings.

The entire drainage basin of about 909 square miles is shown on the topographic maps of the U. S. Geological Survey. For elevation and area at different points along the stream, see table on page 268.

SCHOHARIE CREEK AT FORT HUNTER

This station is located on Schoharie creek at the State feeder dam at Fort Hunter. The station was originally established by the United States Deep Waterway Survey, September 24, 1898, was reëstablished by this Department in coöperation with the United States Weather Bureau, November 17, 1904, and is now maintained by this Department.

Water is diverted above the dam by a feeder to the Erie canal. As the discharge is obtained from the flow over the dam, plus an allowance of 25 second-feet for leakage, the quantities given in the accompanying tables for this station do not indicate the total run-off of Schoharie creek, but only that portion which enters the Mohawk river at this point.

Daily Elevation of Water-surface (B. C. Datum) of Schoharie Creek at Fort Hunter

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	281.30	283.40	280.70	283.80	283.50	281.50	280.25	279.95	281.10	279.10	279.00	281.40
2	281.30	282.90	280.70	284.45	282.85	281.50	280.45	280.25	281.05	278.95	278.90	281.65
3	281.20	282.65	280.70	284.10	282.55	281.40	280.35	280.05	280.70	278.90	278.90	281.85
4	281.20	282.50	280.60	283.50	282.35	281.40	280.15	279.85	280.30	279.00	278.80	281.85
5	281.20	282.40	280.60	283.10	282.45	281.45	280.10	279.55	280.30	279.00	278.80	281.70
6	281.20	282.30	280.60	283.00	282.95	281.30	280.00	279.50	280.20	278.90	278.90	281.85
7	281.20	282.30	280.60	282.95	282.95	281.30	280.60	279.40	280.10	278.90	278.95	281.80
8	281.10	282.20	280.60	284.20	282.75	281.45	281.30	279.30	280.05	278.80	279.00	281.70
9	281.10	282.10	280.60	286.70	282.55	281.35	281.45	279.20	279.75	278.80	279.05	281.60
10	281.10	282.00	280.60	285.00	282.40	281.45	281.50	279.30	279.45	278.90	279.25	281.45
11	281.10	281.90	280.50	284.20	282.25	281.30	281.35	279.25	279.25	278.90	279.20	281.30
12	281.00	281.80	280.50	283.95	281.95	281.20	281.75	279.45	279.15	278.95	279.10	281.25
13	280.90	281.65	280.40	283.80	283.50	281.10	281.55	279.75	279.10	279.00	279.10	281.20
14	280.80	281.50	280.40	283.65	283.40	280.95	281.45	279.95	279.05	278.90	279.00	281.10
15	280.80	281.40	280.50	283.50	282.80	280.75	281.40	280.10	279.15	278.80	279.10	281.10
16	280.70	281.30	281.00	283.65	282.60	280.55	281.65	279.95	279.25	278.90	279.35	281.00
17	280.70	281.20	281.45	283.55	282.45	280.25	281.70	279.75	279.20	278.95	279.85	280.90
18	280.70	281.20	282.90	283.45	282.35	280.05	281.45	279.65	279.20	279.00	281.15	280.80
19	280.70	281.10	283.05	283.60	282.20	279.90	280.95	279.50	279.25	279.10	281.80	280.70
20	280.70	281.00	282.25	284.90	282.10	280.05	280.65	279.60	279.05	279.35	281.60	280.70
21	280.60	281.00	282.05	285.75	282.00	280.10	280.50	280.10	278.90	279.55	281.50	280.60
22	280.60	281.00	282.00	284.45	281.90	280.05	280.50	281.35	278.80	279.95	281.00	280.60
23	280.60	280.90	281.95	283.45	281.80	280.00	280.40	281.85	278.85	279.65	280.60	280.50
24	280.60	280.90	281.95	282.85	281.80	279.95	280.30	281.65	278.80	279.25	280.25	280.40
25	280.75	280.80	282.00	282.65	281.75	279.90	280.25	281.45	278.95	279.15	280.05	280.30
26	280.70	280.80	282.10	283.60	281.70	279.90	280.20	281.15	279.00	279.10	279.85	280.20
27	280.60	280.70	286.25	283.00	281.70	279.80	280.05	280.75	279.05	279.05	279.65	280.20
28	280.75	280.70	288.75	282.90	281.60	279.80	279.95	280.55	279.00	279.00	279.55	280.30
29	280.85	......	285.85	283.55	281.60	279.75	280.50	280.35	278.90	278.90	281.20	280.30
30	283.85	......	284.80	283.85	281.50	279.90	280.05	280.75	279.00	278.90	281.10	280.20
31	283.50	......	284.10	......	281.50	......	279.90	280.80	......	278.80	......	280.20

Daily Inflow, in Second-feet, from Schoharie Creek into Mohawk River at Fort Hunter

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	25	5,143	25	6,710	5,521	138	25	25	25	25	25	57
2.....	25	3,392	25	9,535	3,230	138	25	25	25	25	25	320
3.....	25	2,612	25	7,973	2,320	57	25	25	25	25	25	649
4.....	25	2,179	25	5,521	1,773	57	25	25	25	25	25	649
5.....	25	1,906	25	4,063	2,040	89	25	25	25	25	25	396
6.....	25	1,645	25	3,722	3,555	25	25	25	25	25	25	649
7.....	25	1,645	25	3,555	3,555	25	25	25	25	25	25	560
8.....	25	1,397	25	8,410	2,915	89	25	25	25	25	25	396
9.....	25	1,163	25	21,579	2,320	30	89	25	25	25	25	254
10.....	25	945	25	12,174	1,906	89	138	25	25	25	25	89
11.....	25	744	25	8,410	1,518	25	30	25	25	25	25	25
12.....	25	560	25	7,331	841	25	473	25	25	25	25	25
13.....	25	320	25	6,710	5,521	25	190	25	25	25	25	25
14.....	25	138	25	6,105	5,143	25	89	25	25	25	25	25
15.....	25	57	25	5,521	3,072	25	57	25	25	25	25	25
16.....	25	25	25	6,105	2,466	25	320	25	25	25	25	25
17.....	25	25	89	5,713	2,040	25	396	25	25	25	25	25
18.....	25	25	3,392	5,330	1,773	25	89	25	25	25	25	25
19.....	25	25	3,891	5,909	1,397	25	25	25	25	25	560	25
20.....	25	25	1,518	11,679	1,163	25	25	25	25	25	254	25
21.....	25	25	1,051	16,102	945	25	25	25	25	25	138	25
22.....	25	25	945	9,535	744	25	25	30	25	25	25	25
23.....	25	25	841	5,330	560	25	25	649	25	25	25	25
24.....	25	25	841	3,230	560	25	25	320	25	25	25	25
25.....	25	25	945	2,612	473	25	25	89	25	25	25	25
26.....	25	25	1,163	5,909	396	25	25	25	25	25	25	25
27.....	25	25	18,918	3,722	396	25	25	25	25	25	25	25
28.....	25	25	35,082	3,392	254	25	25	25	25	25	25	25
29.....	25	......	16,653	5,713	254	25	25	25	25	25	25	25
30.....	6,915	......	11,190	6,915	138	25	25	25	25	25	25	25
31.....	5,521	......	7,973	......	138	......	25	25	......	25	......	25
Mean...	425	863	3,384	7,151	1,901	41	77	57	25	25	54	147

NOTE.— Diversion to Erie canal not included in above quantities.

Monthly Inflow from Schoharie Creek into Mohawk River at Fort Hunter

[Drainage area, 909 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	6,915	25	425	0.468	0.54
February	5,143	25	863	0.949	0.988
March	35,082	25	3,384	3.72	4.289
April	21,579	2,612	7,151	7.87	8.781
May	5,521	138	1,901	2.09	2.41
June	138	25	41	0.045	0.05
July	473	25	77	0.085	0.098
August	649	25	57	0.063	0.073
September	25	25	25	0.03	0.033
October	25	25	25	0.03	0.035
November	560	25	54	0.059	0.066
December	649	25	147	0.162	0.187
The year	35,082	25	1,174	1.292	17.55

NOTE.— Diversion to Erie canal not included in above quantities.

SCHOHARIE CREEK AT ESPERANCE

This station is maintained by the city of New York and the records here published have been furnished by Mr. J. Waldo Smith, Chief Engineer of the Board of Water Supply.

Daily Discharge, in Second-feet, of Schoharie Creek at Esperance

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.†	Dec.†
1	392	5,980	365	7,780	3,896	264	94	124	216	48	54	348
2	248	3,170	458	11,712	2,820	252	105	107	184	47	54	486
3	292	2,366	428	7,820	2,282	220	100	86	173	45	58	676
4	340	2,486	325	4,440	1,946	228	100	81	160	42	55	581
5	340	2,594	330	3,992	3,772	268	117	74	150	40	54	518
6	292	1,600	335	3,492	5,302	276	160	66	129	37	54	428
7	288	1,470	340	3,520	3,744	252	188	64	124	35	53	305
8	335	1,520	340	8,830	3,058	236	284	61	109	35	53	399
9	325	1,008	335	22,752	2,294	264	340	61	96	35	54	517
10	368	709	330	7,500	1,874	305	330	58	92	36	55	414
11	422	618	326	5,960	1,560	220	284	55	84	37	55	305
12	325	494	305	7,480	1,600	166	292	64	77	37	57	305
13	252	476	288	4,816	11,040	135	368	69	74	39	55	314
14	†327	494	268	4,056	5,302	141	296	64	69	40	55	335
15	†286	518	264	3,928	3,548	129	244	61	61	40	57	619
16	†254	482	350	4,456	2,390	107	244	64	61	42	64	636
17	234	446	604	4,888	2,066	109	220	77	51	42	677	592
18	315	410	†2,240	5,140	1,720	112	204	71	51	45	738	548
19	270	422	†2,023	5,500	1,450	92	160	71	53	64	583	471
20	230	428	†1,920	12,392	1,260	92	147	119	50	135	500	429
21	279	356	†1,352	15,248	992	100	124	208	48	147	428	548
22	266	350	†990	6,860	800	100	114	434	48	135	373	501
23	256	374	†747	4,600	702	96	129	296	51	122	306	471
24	245	350	†654	3,296	625	92	129	244	54	100	306	255
25	306	325	†613	2,522	646	96	124	208	50	86	335	238
26	657	325	2,840	5,780	530	94	138	180	50	72	229	238
27	594	325	23,520	5,392	476	90	114	*197	53	64	182	195
28	835	325	39,600	3,800	440	92	88	163	53	60	1,011	195
29	1,740	......	15,696	3,618	232	90	88	147	51	57	1,025	195
30	4,280	......	10,752	5,464	368	86	94	188	53	54	547	373
31	4,870	......	8,764	......	350	......	129	236	......	54	......	442
Mean	660	1,086	3,797	6,568	2,229	160	179	120	86	60	271	415

* Meter measurement.

† Flows from Nov. 17 to Dec. 31, inclusive, are based on Prattsville; also flows of Jan. 14, 15 and 16, and Mar. 18 to 25, inclusive. Ice conditions prevailed from Jan. 17 to 28, inclusive, and Feb. 13 to 28, inclusive. Ice went out at 4 P. M., Mar. 27. Ice jam existed 400 feet below gaging station, Mar. 20 to 27. Maximum crest flow occurred on Mar. 28 at 9 A. M., 41,000 second-feet.

Monthly Discharge of Schoharie Creek at Esperance

[Drainage area, 876 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	4,870	230	660	0.75	0.863
February	5,980	325	1,086	1.24	1.293
March	39,600	264	3,797	4.33	5.002
April	22,752	2,522	6,568	7.50	8.396
May	11,040	232	2,229	2.54	2.936
June	305	86	160	0.18	0.205
July	368	88	179	0.20	0.233
August	434	55	129	0.15	0.171
September	216	48	86	0.10	0.107
October	147	35	60	0.07	0.082
November	1,025	53	271	0.31	0.341
December	676	195	415	0.47	0.546
The year	39,600	35	1,300	1.48	20.175

SCHOHARIE CREEK AT CENTRAL BRIDGE

This station was established, April 3, 1904, by this Department in coöperation with the United States Weather Bureau. The gage is located on the D. & H. R. R. bridge across Schoharie creek near Schoharie Junction. Discharge is not computed at this station. The water-surface elevations are referred to United States Geological Survey datum, the bench-mark, a copper plug in the downstream side of the right-hand abutment, being taken as Elev. 595.475.

Daily Elevation of Water-surface (U. S. G. S. Datum) of Schoharie Creek at Central Bridge

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	567.78	572.31	569.56	572.41	571.31	567.44	566.91	566.91	567.34	566.66	566.61	567.38
2.....	567.76	571.46	569.54	571.56	571.11	567.38	566.86	566.86	567.24	566.66	566.61	567.54
3.....	567.76	570.86	569.51	571.04	571.94	567.36	566.86	566.86	567.14	566.66	566.66	567.64
4.....	567.74	570.36	569.51	570.84	570.71	567.41	566.86	566.86	567.06	566.66	566.66	567.66
5.....	567.71	570.26	569.46	570.74	571.46	567.41	566.86	566.81	566.98	566.66	566.66	567.61
6.....	567.66	570.24	569.46	570.66	571.56	567.36	567.08	566.78	566.94	566.61	566.66	567.58
7.....	567.66	570.21	569.41	570.71	570.26	567.31	567.14	566.76	566.88	566.61	566.66	567.54
8.....	567.61	570.16	569.41	572.01	569.56	567.64	567.16	566.74	566.84	566.61	566.66	567.44
9.....	567.61	570.14	569.41	578.86	569.34	567.68	567.34	566.71	566.78	566.61	566.71	567.36
10.....	567.56	570.08	569.41	573.36	569.24	567.28	567.36	566.71	566.76	566.56	566.66	567.31
11.....	567.56	570.04	569.41	572.38	569.14	567.08	567.36	566.76	566.71	566.56	566.58	567.26
12.....	567.76	569.91	569.41	572.46	569.16	567.04	*a*	566.81	566.66	566.56	566.56	567.24
13.....	568.56	569.86	569.41	571.36	573.11	566.98	*a*	566.84	566.66	566.56	566.56	567.18
14.....	568.76	569.78	569.41	570.71	571.46	566.94	*a*	566.91	566.66	566.56	566.56	567.16
15.....	568.76	569.76	569.41	570.26	570.86	566.91	*a*	566.88	566.66	566.56	566.56	567.66
16.....	568.74	569.76	569.61	571.11	570.48	566.88	*a*	566.81	566.66	566.58	566.56	568.04
17.....	568.71	569.76	570.51	571.06	569.96	566.86	*a*	566.76	566.66	566.68	566.64	568.01
18.....	568.71	569.71	570.56	570.86	569.46	566.86	*a*	566.71	566.61	566.68	566.66	567.84
19.....	568.66	569.71	570.41	570.76	568.58	566.86	567.31	566.71	566.61	567.01	566.66	567.44
20.....	568.66	569.71	570.01	575.46	568.76	567.04	567.26	566.76	566.61	567.16	566.81	567.24
21.....	568.66	569.66	569.56	576.41	568.56	567.01	567.21	566.81	566.61	567.04	567.01	567.31
22.....	568.71	569.66	569.16	572.71	568.44	566.98	567.14	566.76	566.56	566.94	567.06	567.38
23.....	568.71	569.61	569.06	571.81	568.31	566.96	567.06	566.76	566.56	566.88	567.06	567.48
24.....	568.71	569.61	569.56	571.31	568.18	566.96	567.14	567.46	566.58	566.84	567.06	567.64
25.....	568.81	569.56	570.26	570.86	568.08	566.96	567.06	567.36	566.76	566.76	567.08	567.71
26.....	568.96	569.56	572.96	572.26	567.94	566.91	566.96	567.21	566.71	566.71	567.14	568.06
27.....	568.96	569.56	582.96	571.11	567.84	566.91	566.91	567.08	566.71	566.68	567.21	568.06
28.....	569.16	569.56	585.46	570.46	567.74	566.91	566.86	567.11	566.71	566.61	567.24	568.06
29.....	571.16	......	575.81	570.24	567.64	566.91	566.88	567.26	566.68	566.61	567.26	567.78
30.....	574.96	......	573.51	571.66	567.54	566.91	566.91	567.34	566.66	566.61	567.31	568.06
31.....	572.26	......	572.81	......	567.48	......	566.91	567.44	......	566.61	......	568.18

a No record.

SCHOHARIE CREEK AT MIDDLEBURG

A temporary gaging station was established at Middleburg, August 24, 1906, by Robert E. Horton for this Department. The gage consists of an enameled steel scale subdivided to hundredths of a foot, about 300 feet below Middleburg bridge. The stream channel is straight for a considerable distance below and above the gage. The bed is of gravel and cobblestones, fairly smooth and permanent. The stream is confined near the right bank during low water and measurements are made by boat or by wading opposite the gage. At ordinary high stages the stream can be measured from the Middleburg bridge. Gage readings are taken each morning and night by Minnie E. Wheeler.

Daily Gage Height, in Feet, of Schoharie Creek at Middleburg

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	1.82	4.75	2.45	5.95	4.00	1.42	1.00	1.00	1.30	0.65	0.75	1.52
2......	1.90	3.72	2.65	7.25	3.60	1.32	0.95	0.92	1.20	0.65	0.80	1.58
3......	1.52	3.35	2.78	5.68	3.28	1.25	0.95	0.90	1.20	0.65	0.80	1.75
4......	1.70	3.40	2.70	4.48	3.05	1.35	0.95	0.90	1.22	0.65	0.75	1.65
5......	1.72	3.35	2.65	4.22	3.68	1.58	0.95	0.90	1.12	0.65	0.75	1.58
6......	2.02	2.88	2.65	4.05	4.82	1.42	1.32	0.90	1.05	0.65	0.75	1.50
7......	1.52	2.78	2.62	3.95	4.02	1.30	1.35	0.85	1.05	0.65	0.70	1.50
8......	1.65	2.62	2.48	7.77	3.58	1.58	1.85	0.80	1.00	0.65	0.70	1.50
9......	1.70	2.50	2.40	8.25	3.35	1.70	1.52	0.75	1.00	0.65	0.70	1.50
10......	1.75	3.62	2.35	5.90	3.12	1.45	1.45	0.75	0.95	0.65	0.80	1.45
11......	1.95	3.28	2.30	4.90	3.92	1.32	1.85	0.75	0.90	0.65	0.85	1.40
12......	1.90	2.72	2.25	5.12	3.00	1.25	1.70	0.95	0.85	0.65	0.82	1.30
13......	1.85	2.30	2.25	4.65	6.50	1.15	1.55	1.12	0.85	0.65	0.75	1.15
14......	1.80	2.05	2.20	4.10	4.50	1.15	1.40	1.02	0.85	0.65	0.75	1.45
15......	1.75	2.30	2.12	4.10	3.90	1.10	1.30	0.92	0.85	0.65	0.80	1.52
16......	1.82	2.52	2.08	4.25	3.58	1.10	1.35	0.85	0.85	0.65	0.88	1.65
17......	1.90	2.62	2.70	4.32	3.20	1.05	1.30	0.80	0.80	0.68	1.98	1.82
18......	1.92	2.70	4.30	4.60	3.02	1.00	1.22	0.82	0.75	0.78	1.52	1.62
19......	1.80	2.70	4.05	4.85	3.78	0.95	1.15	0.98	0.75	1.15	1.35	1.38
20......	1.80	2.65	3.50	8.05	2.58	1.00	1.10	1.32	0.70	1.35	1.38	1.60
21......	1.78	2.65	3.35	7.70	2.48	1.00	1.05	1.70	0.70	1.12	1.42	1.65
22......	1.70	2.60	3.05	5.50	2.32	0.95	1.08	2.18	0.70	1.02	1.22	1.70
23......	1.65	2.58	2.95	4.45	2.18	0.95	1.00	1.72	0.65	0.92	1.30	1.65
24......	1.72	2.50	2.72	4.02	2.10	0.95	1.10	1.48	0.70	0.85	1.25	1.58
25......	2.05	2.50	2.68	3.80	1.98	1.00	1.12	1.38	0.70	0.90	1.20	1.50
26......	2.42	2.45	8.17	4.75	1.90	0.92	1.05	1.28	0.75	0.85	1.20	1.58
27......	2.52	2.50	9.17	4.40	1.90	0.90	1.00	1.15	0.75	0.85	1.62	1.58
28......	2.68	2.45	10.60	3.98	1.85	0.95	0.92	1.10	0.70	0.85	2.10	1.50
29......	3.25	......	7.75	4.02	1.68	1.05	0.90	1.15	0.70	0.80	1.68	1.50
30......	5.83	......	6.50	4.28	1.60	1.10	0.98	1.35	0.70	0.75	1.52	1.58
31......	5.25	......	6.00	......	1.52	......	1.08	1.40	......	0.75	......	1.75

Daily Discharge, in Second-feet, of Schoharie Creek at Middleburg

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	373	3,990	747	6,530	2,770	209	66	66	164	16	23	246
2......	406	2,318	925	[b]8,380	2,140	173	53	45	130	16	26	264
3......	246	1,800	1,049	5,860	1,698	147	53	40	130	16	26	338
4......	314	1,870	974	3,520	1,390	182	53	40	138	16	23	294
5......	326	1,800	925	3,120	2,245	264	53	40	107	16	23	264
6......	470	1,156	925	2,845	4,130	209	173	40	83	16	23	236
7......	246	1,049	900	2,685	2,808	164	182	33	83	16	20	236
8......	294	900	768	[b]8,380	2,105	264	384	26	66	16	20	236
9......	314	790	704	[b]8,380	1,800	314	246	23	66	16	20	236
10......	338	2,175	669	6,400	1,495	218	218	23	53	16	26	218
11......	431	1,698	634	4,280	2,642	173	384	23	40	16	33	200
12......	406	999	602	4,740	1,320	147	314	53	33	16	29	164
13......	384	634	602	3,810	8,380	115	255	107	33	16	23	115
14......	362	483	570	2,920	3,560	115	200	73	33	16	23	218
15......	338	634	525	2,920	2,600	100	164	45	33	16	26	246
16......	373	812	496	3,160	2,105	100	182	33	33	16	37	294
17......	406	900	974	3,280	1,600	83	164	26	26	18	444	373
18......	418	974	3,240	3,720	1,355	66	138	29	23	25	246	284
19......	362	974	2,845	4,180	2,392	53	115	61	23	115	182	191
20......	362	925	2,000	[b]8,380	854	66	100	173	20	182	191	274
21......	350	925	1,800	[b]8,380	768	66	83	314	20	107	209	294
22......	314	876	1,390	5,500	652	53	93	555	20	73	138	314
23......	294	854	1,252	3,480	555	53	66	326	16	45	164	294
24......	326	790	999	2,808	510	53	100	227	20	33	147	264
25......	483	790	950	2,430	444	66	107	191	20	40	130	236
26......	726	747	[b]8,380	3,990	406	45	83	156	23	33	130	264
27......	812	790	[b]8,380	3,400	406	40	66	115	23	33	284	264
28......	950	747	[b]8,380	2,728	384	53	45	100	20	33	510	236
29......	1,665	......	[b]8,380	2,808	304	83	40	115	20	26	304	236
30......	6,235	......	8,380	3,200	274	100	61	182	20	23	246	264
31......	5,010	......	6,660	......	246	......	93	200	......	23	......	338
Mean...	785	1,193	2,452	4,540	1,753	126	140	112	51	34	124	256

[b] Limit of rating table; actual discharge greater.

Monthly Discharge of Schoharie Creek at Middleburg
[Drainage area, 527 square miles]

1914	Discharge in Second-feet				Run-off
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	6,235	204	785	1.49	1.72
February	3,990	483	1,193	2.26	2.35
March	*b*8,380	496	2,452	4.65	5.36
April	*b*8,380	2,430	4,540	8.61	9.61
May	8,380	246	1,753	3.33	3.84
June	314	40	126	0.239	0.27
July	384	40	140	0.266	0.31
August	555	23	112	0.213	0.25
September	164	16	51	0.096	0.11
October	182	16	34	0.064	0.07
November	510	20	124	0.236	0.26
December	373	115	256	0.486	0.56
The year	*b*8,380	16	959	1.82	24.71

b Limit of rating curve; actual discharge greater.

SCHOHARIE CREEK AT PRATTSVILLE

Schoharie creek above Prattsville drains a rugged, mountainous area, almost entirely wooded. The watershed, 238 square miles in extent, lies wholly within Greene county. Rocks of the Catskill formation, chiefly sandstones and conglomerates, lie at or near the surface over most of the area. The basin is surrounded by nearly continuous mountain ranges and intervening ridges divide the main stream from its principal tributaries — Batavia kill, East kill and West kill.

The gaging station was established, November 7, 1902, by Robert E. Horton for the U. S. Geological Survey in coöperation with the New York Water Supply Department, on the highway bridge at Prattsville. It was assumed and continued by the Board of Water Supply of the city of New York on May 7, 1907, at which time a new standard Board of Water Supply chain gage was installed. The old datum was preserved and the present readings conform to those already obtained.

The gage is attached to the floor of the bridge on the upstream side near the left bank. The gage datum is referred to a benchmark — a circle of white paint marked on a boulder at the right end of the downstream side of the bridge, elevation 1,151.00, United States Geological Survey datum.

The bridge is a single-span steel highway bridge, 187.8 feet between abutments, and all the water passes between them at all but the very highest stages.

In high water, measurements are made from the bridge, while in low-water stages they may be made by wading at a point about 500 feet below the bridge.

Daily Discharge, in Second-feet, of Schoharie Creek at Prattsville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	195	2,074	143	2,424	1,390	89	24	27	50	12	19	229
2.....	109	1,290	151	3,826	1,110	73	27	27	39	12	24	319
3.....	179	990	163	2,354	870	68	24	24	57	11	15	274
4.....	171	1,210	183	1,712	782	73	25	24	46	11	18	244
5.....	227	960	143	1,544	1,370	108	65	19	37	15	17	202
6.....	185	678	143	1,230	2,312	79	79	18	39	12	13	144
7.....	143	718	143	1,330	1,496	60	125	15	37	10	15	188
8.....	124	525	124	3,790	1,210	170	202	15	33	10	17	244
9.....	139	483	*136	5,250	1,030	100	92	12	30	9	27	195
10.....	217	525	136	2,480	862	65	96	22	27	11	22	144
11.....	217	470	139	1,988	766	55	55	27	24	11	18	144
12.....	195	403	143	2,214	1,210	48	76	76	24	22	19	148
13.....	143	283	136	1,868	1,350	48	86	41	19	14	19	158
14.....	121	277	127	1,532	1,616	33	68	30	24	12	19	292
15.....	106	343	127	1,544	1,260	55	79	25	18	11	19	300
16.....	94	337	203	1,832	1,010	36	104	19	17	15	319	279
17.....	106	289	654	1,784	846	31	52	22	15	24	348	258
18.....	97	252	830	1,856	742	27	52	24	13	79	275	222
19.....	76	252	750	2,746	638	24	48	39	13	100	236	202
20.....	67	227	710	6,458	567	36	36	43	11	73	202	258
21.....	59	183	501	4,456	497	27	39	411	15	50	176	236
22.....	82	183	367	2,466	434	27	31	258	15	31	144	222
23.....	67	167	277	1,952	369	30	33	108	13	27	144	*120
24.....	88	127	242	1,450	275	33	43	92	13	24	158	112
25.....	403	106	227	1,370	244	30	30	68	17	19	108	112
26.....	325	106	1,940	2,214	202	24	33	52	15	22	86	92
27.....	257	112	6,964	1,784	*229	24	30	48	15	*23	477	92
28.....	397	109	9,126	1,508	188	28	28	48	22	18	483	92
29.....	678	......	4,168	1,688	134	34	27	73	13	23	258	176
30.....	2,910	......	2,830	1,868	121	24	39	79	15	19	164	†208
31.....	1,688	......	2,788	......	100	......	27	70	......	17	......	†292
Mean...	319	488	1,120	2,351	814	52	57	60	24	24	129	200

NOTE.— Ice conditions prevailed from January 1 to 28, inclusive, February 12 to 28, inclusive, March 1 to 25, inclusive and December 13 to 31, inclusive. Ice went out March 26 at 2:45 P. M. Maximum discharge, 9,178 second-feet occurred at noon, March 28.

* Meter measurement. † Estimated.

Monthly Discharge of Schoharie Creek at Prattsville
[Drainage area, 236 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	2,910	59	319	1.35	1.542
February	2,074	106	488	2.07	2.160
March	9,126	124	1,120	4.74	5.473
April	6,458	1,230	2,351	9.96	11.109
May	2,312	100	814	3.45	3.976
June	170	24	52	0.22	0.248
July	202	24	57	0.24	0.279
August	411	12	60	0.25	0.292
September	57	11	24	0.10	0.113
October	100	9	24	0.10	0.120
November	483	13	129	0.55	0.609
December	319	92	200	0.85	0.977
The year	9,126	9	468	1.98	26.898

EAST CANADA CREEK

DESCRIPTION

East Canada creek rises in Hamilton county and flows southward between Herkimer and Fulton counties, joining the Mohawk at East Creek. In a general way its drainage basin is similar to that of West Canada creek, although its flow is less sustained and regular.

Spruce creek, the principal tributary of East Canada creek, enters 1 mile above Dolgeville and drains an area of 50 square miles. Water is diverted from this creek and from Beaver creek, one of the tributaries at Diamond Hill and is carried to Little Falls through a cast-iron conduit 9 miles long. The water-supply of Dolgeville is taken from Cole brook, a tributary of East Canada creek. No allowance for diversion of water-supply has been made in computing the run-off for East Canada creek.

For table of drainage areas of East Canada creek, see page 269.

EAST CANADA CREEK AT DOLGEVILLE

A gaging station on this stream was established for the U. S. Board of Engineers on Deep Waterways in 1898. It was maintained by the U. S. Geological Survey in coöperation with this Department from 1900 to June, 1907, inclusive, when it was taken over by this Department.

Observations are taken at High Falls, near Dolgeville, about 7 miles from the outlet of the stream. The gaging station is located at the dam of the Herkimer County Light and Power Company. The dam is of rubble masonry, 19 feet high, and has a flat crest 6 feet wide and 190.25 feet long between abutments. The elevation of upstream edge of the crest is 1 foot below that of the lip. The impounded water is conducted to the power-house, 500 feet below the dam, through a wrought-iron flume, 10 feet in diameter.

Readings of the depth on the crest are taken from a vertical gage board attached to the bulkhead, 6 feet upstream, twice each day by Godfrey Aman. A record is also kept of the run of the water-wheels and the elevation of water in the tail-race. The record since January 1, 1903, has been computed from a discharge curve based on the United States Geological Survey experiments made at Cornell University on a full-sized model of the crest. The flow through the turbines for this period has also been computed from current-meter measurments, made in the tail-race of the electric power-plant instead of from the manufacturer's rating tables for the water-wheels, as formerly. The turbines are of a special Victor cylinder-gate type. The two main wheels are each 36 inches in diameter and their speed is controlled by Lombard governors. Beginning November 12, 1907, a pair of 36-inch Rodney Hunt turbines have also been in use.

Daily Discharge, in Second-feet, of East Canada Creek at Dolgeville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	181	253	135	1,844	1,572	116	137	108	319	121	113	347
2	305	209	185	1,569	1,057	183	128	85	227	117	129	656
3	226	170	180	2,203	1,063	102	116	95	510	109	126	778
4	189	170	180	1,775	475	263	100	100	365	105	130	557
5	245	273	175	1,509	640	274	105	95	251	105	125	359
6	162	170	180	1,010	653	211	92	85	124	105	134	194
7	163	170	170	1,264	801	129	139	85	243	113	137	212
8	190	121	171	2,804	1,017	254	214	85	218	109	143	244
9	209	222	170	3,507	863	327	200	90	167	113	195	278
10	170	214	180	2,454	213	226	150	85	118	105	135	230
11	206	190	173	1,734	379	226	200	85	121	105	151	233
12	300	115	145	1,181	362	176	106	90	136	100	190	165
13	147	136	150	1,252	795	115	122	100	109	113	190	212
14	163	135	171	1,608	758	129	164	100	109	109	192	214
15	127	126	174	969	643	95	139	166	138	105	240	133
16	182	171	208	1,623	529	109	148	137	117	118	736	147
17	243	198	361	2,465	389	117	124	122	121	210	1,175	287
18	273	198	425	2,348	389	117	172	137	125	194	487	209
19	195	200	330	3,994	391	113	47	117	117	251	299	180
20	226	200	315	7,809	340	149	111	126	90	192	270	136
21	226	150	246	5,904	332	117	131	246	99	180	202	159
22	189	98	161	2,565	243	113	140	233	108	168	151	182
23	268	140	243	2,346	190	113	148	139	113	176	157	170
24	183	137	243	2,085	127	113	177	160	113	145	125	150
25	129	146	257	1,801	211	110	106	200	135	117	197	130
26	195	133	301	1,907	170	104	105	142	127	131	253	176
27	156	135	546	2,482	193	105	105	139	189	168	304	145
28	201	134	880	1,975	166	108	95	187	130	137	349	184
29	243	......	1,634	1,512	198	137	109	311	125	123	381	191
30	227	......	1,768	1,784	170	148	113	845	121	173	225	221
31	234	......	1,962	......	......	......	116	687	......	120	......	227
Mean	205	168	401	2,289	494	153	131	174	166	137	256	249

Monthly Discharge of East Canada Creek at Dolgeville
[Drainage area, 257 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	305	127	205	0.798	0.92
February	273	98	168	0.654	0.68
March	1,962	135	401	1.56	1.80
April	7,809	969	2,289	8.91	9.94
May	1,572	127	494	1.92	2.21
June	327	95	153	0.595	0.66
July	214	47	131	0.510	0.59
August	845	85	174	0.677	0.78
September	510	90	166	0.646	0.72
October	251	100	137	0.533	0.61
November	1,175	113	256	0.996	1.11
December	778	130	249	0.969	1.12
The year	7,809	47	400	1.56	21.14

WEST CANADA CREEK

DESCRIPTION OF BASIN

West Canada creek rises in West Canada lake, in southwest-central Hamilton county, and flows southwestward, then southeastward into the Mohawk at Herkimer, N. Y.

The drainage area, approximately 584 square miles, is shown on the Utica, Little Falls, Remsen, Wilmurt, Old Forge and Canada lake quadrangles, U. S. Geological Survey topographic map.

There are about fifty small lakes and a few undrained ponds in the watershed of the stream. Most of these are situated near the headwater, the largest single water-surface being Honnedaga lake, 1.4 square miles in extent. There is also a small amount of controllable storage, in reservoirs formed by three dams. Swamps and marshes are numerous in the region of the headwaters, usually adjoining lakes and tributaries and having an extent of one-half square mile or less each.

At Trenton Falls there is an important plant of the Utica Gas & Electric Co.

Much of the region above Twin Rock is timber-covered. There are extensive sand areas in the central and upon drainage basins. The soil of the upper watershed is underlaid by granite gneiss usually at or near the surface, excepting in alluvial valleys. From a point just above Twin Rock bridge and extending downstream beyond Trenton Falls the underlying geological formation is Trenton limestone.

Compacted snow accumulates in the woodlands in winter, often to a depth of three or four feet, and representing an inch of water for each five or six inches of snow. This melts slowly, feeding the stream in March and April, which months may show a run-off greatly exceeding the precipitation.

At Hinckley there is nearing completion by the State of New York a storage reservoir of 3,445,000,000 cubic feet capacity for the supply of the Rome summit level of the Barge canal. The stored water will be passed down West Canada creek and diverted by a new dam on the site of the old Morgan dam at Trenton Falls, through a feeder canal and Nine-Mile creek to the Barge canal.

For table of drainage areas of West Canada creek, see page 270.

WEST CANADA CREEK AT KAST BRIDGE, NEAR HERKIMER

This gaging station, which is located on West Canada creek about four miles from its junction with the Mohawk river, was established May 15, 1905, by Robert E. Horton, hydrographer, U. S. Geological Survey. The station has since been maintained by this Department.

The gage is of the weight-and-reel type and is placed in a box secured to the north railing of bridge at first panel point from east abutment. The readings are taken by measuring down from a scale in the box to the water-surface by means of an iron weight suspended by a tape graduated to feet, which is attached to the reel. The scale in box is one foot long, graduated to tenths and hundredths. The elevation of bench-mark on north end of bridge-seat of right-hand abutment is 458.02.

Observations are taken twice daily by Lloyd Kast.

Discharge measurements are made from the downstream side of the bridge to which the gage tape is attached. The initial point for soundings is the top face of the left abutment, downstream side. The drainage area at this point is 575 square miles, or 58 per cent greater than at Twin Rock bridge.

Current-meter Discharge Measurements of West Canada Creek at Kast Bridge, near Herkimer

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
April 15	Wallace & Fogarty	30.70	3,551
June 17	Leggett & Scully	28.04	289

Daily Elevation of Water-surface (B. C. Datum) of West Canada Creek at Kast Bridge, near Herkimer

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	442.70	445.70	444.76	445.87	445.54	442.50	442.40	442.25	443.71	442.30	442.50	443.55
2......	442.66	445.44	444.85	446.79	444.72	442.30	442.41	442.21	443.43	442.14	442.46	443.94
3......	442.14	*a*	444.93	446.08	444.34	441.83	442.36	442.12	443.84	442.06	442.38	443.90
4......	442.88	*a*	444.90	445.38	444.38	442.16	442.38	442.14	443.72	442.29	442.48	443.98
5......	442.84	*a*	444.84	444.86	445.14	442.70	442.36	442.10	443.58	442.06	442.44	443.82
6......	442.64	445.43	444.81	444.22	445.30	442.89	442.36	442.15	443.34	442.15	442.44	443.82
7......	442.78	445.00	444.79	444.04	444.88	442.80	442.46	442.02	443.33	442.21	442.59	443.66
8......	442.70	444.82	444.80	446.38	444.38	443.02	442.44	442.16	443.23	442.26	442.60	443.61
9......	442.81	444.78	444.79	446.45	443.60	442.90	442.41	442.19	442.72	442.16	442.67	443.24
10......	442.90	444.74	444.78	445.58	443.66	442.94	442.88	442.06	442.65	442.41	442.70	443.17
11......	442.82	444.50	444.80	445.10	444.02	443.00	442.84	442.12	442.57	442.07	442.54	443.02
12......	442.77	444.36	444.78	445.56	443.50	442.84	442.51	442.20	442.60	442.03	442.58	442.62
13......	442.71	444.38	444.72	444.72	444.48	442.60	442.53	442.14	442.42	442.06	442.60	442.67
14......	*a*	444.49	444.72	444.58	444.44	442.48	442.57	442.28	442.14	442.26	442.69	442.58
15......	*a*	444.67	444.66	444.84	443.90	442.48	442.66	442.25	442.62	442.21	442.78	442.60
16......	*a*	444.63	444.98	445.12	443.75	442.32	442.46	442.09	442.59	442.28	443.33	443.01
17......	*a*	444.76	445.38	445.07	443.67	442.26	442.30	441.98	442.50	442.40	443.46	442.56
18......	*a*	444.84	446.12	444.72	443.56	442.22	442.21	442.32	442.37	442.68	443.86	442.64
19......	*a*	444.86	445.87	446.18	443.43	442.26	442.18	442.32	442.26	442.84	443.92	442.66
20......	*a*	444.84	445.64	448.48	443.38	442.23	442.34	442.18	442.30	442.66	443.86	442.84
21......	445.68	444.84	445.28	448.52	443.22	442.00	442.33	442.72	442.06	442.78	443.77	442.69
22......	445.57	444.80	445.22	446.64	442.92	442.76	442.20	442.94	442.14	442.74	443.64	442.78
23......	445.67	444.78	445.16	445.94	442.94	442.25	442.31	442.70	442.22	442.67	443.38	442.80
24......	445.66	444.78	445.08	445.28	442.86	442.38	442.24	442.94	442.72	442.54	443.24	442.84
25......	446.10	444.82	445.05	444.74	442.88	442.22	442.37	442.82	442.81	442.52	443.16	443.40
26......	445.98	444.82	445.94	445.06	442.79	442.20	442.21	442.88	442.51	442.46	443.19	444.98
27......	446.10	444.81	446.76	445.32	442.80	442.25	442.12	442.53	442.46	442.30	443.40	446.00
28......	446.24	444.80	446.34	445.33	442.68	442.20	442.20	442.55	442.33	442.37	443.29	445.86
29......	446.32	......	446.23	446.00	442.60	442.12	442.19	443.26	442.27	442.24	443.19	445.68
30......	446.40	......	446.34	446.30	442.46	442.18	442.26	443.93	442.30	442.26	443.18	445.68
31......	445.86	......	446.00	......	442.50	......	442.18	444.00	......	442.35	......	445.66

a No record. NOTE.— Elevations from January 21 to March 26 and December 26 to 31 inclusive, are taken to top of ice.

Daily Discharge, in Second-feet, of West Canada Creek at Kast Bridge, near Herkimer

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	456	......	......	5,680	4,900	361	314	243	1,210	267	361	1,140
2......	437	......	......	7,990	2,910	267	319	227	1,020	200	342	1,620
3......	200	......	......	6,170	2,220	116	295	194	1,480	176	304	1,560
4......	577	......	......	4,500	2,290	208	304	200	1,320	262	351	1,670
5......	548	......	......	3,230	3,910	456	295	188	1,180	176	333	1,450
6......	428	......	......	2,010	4,300	584	295	204	930	204	333	1,450
7......	504	......	......	1,760	3,280	518	342	165	920	227	404	1,260
8......	456	......	......	6,910	2,290	680	333	208	833	248	409	1,210
9......	526	......	......	7,080	1,197	591	319	219	465	208	442	840
10......	591	......	......	4,990	1,260	621	577	176	433	319	456	789
11......	533	......	......	3,810	1,730	665	548	194	394	179	380	680
12......	497	......	......	4,940	1,090	548	366	223	409	167	399	418
13......	461	......	......	2,910	2,470	409	375	200	323	176	409	442
14......	......	......	......	2,660	2,400	351	394	257	200	248	451	399
15......	......	......	......	3,180	1,560	351	437	243	418	227	504	409
16......	......	......	......	3,860	1,350	276	342	185	404	257	920	672
17......	......	......	......	3,730	1,270	248	267	154	361	314	1,050	390
18......	......	......	......	2,910	1,150	230	227	276	299	446	1,500	428
19......	......	......	......	6,410	1,020	248	215	276	248	548	1,590	437
20......	......	......	......	13,180	973	234	285	215	267	437	1,500	548
21	......	......	......	13,320	826	159	280	465	176	504	1,380	451
22......	......	......	......	7,580	606	489	223	621	200	475	1,240	504
23......	......	......	......	5,840	621	243	271	456	230	442	973	518
24......	......	......	......	4,250	562	304	238	621	465	380	840	548
25......	......	......	......	2,950	577	230	299	533	526	370	782	......
26......	......	......	......	3,710	511	223	227	577	366	342	804	......
27......	......	......	7,900	4,350	518	243	194	375	342	267	993	......
28......	......	......	6,810	4,380	446	223	223	385	280	299	880	......
29......	......	......	6,530	5,980	409	194	219	855	252	238	804	......
30......	......	......	6,810	6,710	342	215	248	1,600	267	248	797	......
31......	......	......	5,890	......	361	......	215	1,700	......	290	......	......
Mean...	......	......	......	5,233	1,592	349	307	401	541	295	731	749

NOTE.— From January 14 to March 26 and December 25 to 31, inclusive, ice period. Discharge during this period not determined.

Mean discharge December 25 to 31, inclusive, estimated at 483 second-feet.

Monthly Discharge of West Canada Creek at East Bridge, near Herkimer
[Drainage area, 575 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
April	13,320	1,760	5,233	9.10	10.15
May	4,900	342	1,592	2.77	3.19
June	680	116	349	0.607	0.68
July	577	194	307	0.534	0.62
August	1,700	154	401	0.697	0.80
September	1,480	176	541	0.941	1.05
October	548	167	295	0.513	0.59
November	1,590	304	731	1.27	1.42
December	1,620	390	749	1.30	1.50

WEST CANADA CREEK AT POLAND

A gaging station was established by this Department on West Canada creek at the first highway bridge below the village of Poland, July 3, 1908. The gage is of the weight-and-chain variety, contained in a box of standard form, which is fastened to the hand railing of the downstream side of the bridge near the left-hand end. The gage is read each morning and night. Current-meter measurements obtained during 1908-1910 established a consistent rating curve for low stages of the stream. The accompanying discharge tables have been deduced by the use of this curve.

This station was abandoned, December 31, 1914.

Current-meter Discharge Measurements of West Canada Creek at Poland

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
April 15	Wallace & Fogarty	5.95	2,844
June 17	Leggett & Scully	3.52	391

Daily Gage Height, in Feet, of West Canada Creek at Poland

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	4.09	4.39	3.89	7.09	6.69	3.09	3.39	3.14	4.69	3.24	3.14	4.49
2......	4.09	4.29	3.94	7.74	6.44	2.89	3.34	3.14	4.44	3.14	3.14	4.94
3......	4.09	4.04	3.99	7.34	6.29	2.99	3.44	3.39	4.84	3.29	3.14	4.99
4......	3.84	4.04	3.94	6.44	5.74	3.39	3.34	3.24	4.79	3.04	3.24	5.14
5......	3.79	4.09	3.94	5.79	6.39	3.89	3.34	3.14	4.59	3.19	3.29	5.04
6......	3.89	4.09	3.94	5.14	6.44	3.89	3.39	3.14	4.09	3.14	3.49	4.89
7......	3.69	3.84	3.99	5.04	6.49	4.14	3.49	3.14	4.74	3.24	3.49	4.79
8......	3.74	3.94	3.99	6.29	5.59	3.89	3.39	3.09	3.99	3.19	3.49	4.59
9......	3.89	3.94	3.99	7.94	5.09	3.94	3.49	3.09	3.64	3.09	3.59	4.09
10......	4.54	3.94	3.94	7.44	5.39	3.99	3.99	3.14	3.49	3.04	3.54	3.99
11......	3.74	3.94	3.79	6.34	4.94	3.94	3.74	3.19	3.49	3.09	3.49	3.79
12......	3.69	3.84	3.74	6.69	4.69	3.94	3.64	3.19	3.44	3.09	3.54	3.59
13......	3.89	3.94	3.74	5.99	5.44	3.64	3.59	3.19	2.99	3.09	3.54	3.79
14......	3.89	3.89	3.69	5.84	5.84	3.64	3.59	3.19	3.39	3.14	3.54	3.99
15......	4.24	3.94	3.74	5.94	5.24	3.59	3.59	3.24	3.44	3.09	3.79	3.99
16......	4.29	3.94	3.69	6.74	5.09	3.54	3.54	2.89	3.44	3.14	4.29	4.04
17......	4.14	3.89	4.14	6.14	4.64	3.29	3.34	3.14	3.39	3.59	4.34	3.84
18......	4.04	3.94	4.09	7.09	4.39	3.24	3.19	3.19	3.29	3.29	5.19	3.64
19......	4.09	3.99	4.04	7.79	4.39	3.04	3.19	3.29	3.19	3.39	5.19	3.59
20......	4.04	3.94	3.94	10.84	4.09	3.09	3.34	3.44	3.09	3.59	4.99	3.59
21......	4.04	3.94	3.84	10.84	3.89	2.99	3.24	3.84	3.19	3.49	4.79	3.69
22......	4.04	3.89	3.79	9.44	3.89	2.89	3.24	3.64	3.19	3.49	4.69	3.69
23......	4.04	3.84	3.74	8.34	3.89	3.29	3.24	3.24	3.34	3.49	4.34	3.64
24......	4.04	3.94	3.69	7.59	3.79	3.39	3.19	3.79	4.14	3.34	4.29	3.64
25......	3.99	3.94	3.84	5.99	3.84	3.19	3.24	3.79	3.69	3.39	4.14	3.64
26......	4.19	3.94	4.09	6.89	3.74	3.24	3.09	3.59	3.29	3.49	4.04	3.59
27......	4.29	3.94	4.94	6.89	3.79	3.19	3.29	3.49	2.99	3.19	4.14	3.69
28......	4.34	3.94	6.64	6.69	3.79	3.29	3.24	3.64	3.24	3.24	4.24	3.74
29......	4.39	......	7.49	7.84	3.59	3.24	3.19	4.19	3.24	3.19	4.19	3.59
30......	4.44	......	7.29	8.04	3.44	3.39	3.19	5.09	3.34	3.24	4.19	3.74
31......	4.49	......	7.14	......	3.49	......	3.24	5.04	......	3.24	......	3.94

Daily Discharge, in Second-feet, of West Canada Creek at Poland

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	......	......	......	4,560	3,870	176	304	196	1,110	236	196	943
2......	......	......	......	5,890	3,470	96	281	196	919	196	196	1,330
3......	......	......	......	5,060	3,220	136	327	304	1,240	258	196	1,380
4......	......	......	......	3,470	2,340	304	281	236	1,190	156	236	1,540
5......	......	......	......	2,410	3,390	558	281	196	1,020	216	258	1,430
6......	......	......	......	1,540	3,470	558	304	196	678	196	350	1,290
7......	......	......	......	1,430	3,560	706	350	196	1,150	236	350	1,190
8......	......	......	......	3,220	2,120	558	304	176	614	216	350	1,020
9......	......	......	......	6,310	1,490	586	350	176	425	176	400	678
10......	......	......	......	5,270	1,850	614	614	196	350	156	375	615
11......	......	......	......	3,300	1,340	586	475	216	350	176	350	502
12......	......	......	......	3,870	1,110	586	425	216	327	176	375	400
13......	......	......	......	2,720	1,910	425	400	216	116	176	375	502
14......	......	......	......	2,490	2,490	425	400	216	304	196	375	615
15......	......	......	......	2,650	1,650	400	400	236	327	176	502	615
16......	......	......	......	3,950	1,490	375	375	96	327	196	807	646
17......	......	......	......	2,970	1,070	258	281	196	304	400	841	530
18......	......	......	......	4,560	875	236	216	216	258	258	1,600	425
19......	......	......	......	5,990	875	156	216	258	216	304	1,600	400
20......	......	......	......	12,650	678	176	281	327	176	400	1,380	400
21......	......	......	......	12,650	558	136	236	530	216	350	1,190	450
22......	......	......	......	9,630	558	96	236	425	216	350	1,110	450
23......	......	......	......	7,120	558	258	236	236	281	350	841	425
24......	......	......	......	5,580	502	304	216	502	705	281	807	425
25......	......	......	......	2,720	530	216	236	502	450	304	705	425
26......	......	......	......	4,210	475	236	176	400	258	350	646	400
27......	......	......	......	4,210	502	216	258	350	116	216	705	425
28......	......	......	......	3,870	502	258	236	425	236	236	774	475
29......	......	......	......	6,100	400	236	216	741	236	216	741	400
30......	......	......	......	6,510	327	304	216	1,490	281	236	741	475
31......	......	......	......	......	350	......	236	1,430	......	236	......	586
Mean...	......	......	......	4,897	1,533	339	302	364	480	246	646	690

NOTE.— January–March ice period discharge not determined.

Monthly Discharge of West Canada Creek at Poland
[Drainage area, 470 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
April	12,650	1,430	4,897	10.42	11.62
May	3,870	327	1,533	3.26	3.76
June	706	96	339	0.721	0.80
July	614	176	302	0.642	0.74
August	1,490	96	364	0.774	0.89
September	1,240	116	480	1.02	1.14
October	400	156	246	0.523	0.60
November	1,600	196	646	1.37	1.53
December	1,540	400	690	1.47	1.70

WEST CANADA CREEK AT MORGAN DAM, TRENTON FALLS

This station was established February 8, 1904, by this Department and is maintained in coöperation with the United States Weather Bureau. The gage is located on the right bank of the stream about one hundred feet above the site of the old Morgan dam.

A new dam is being constructed by the State above the old dam to divert water through the Nine-Mile creek feeder for the supply of the Rome summit level of the Barge canal.

Daily Elevation of Water-surface (B. C. Datum) of West Canada Creek above Morgan Dam, Trenton Falls

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	749.96	749.96	749.46	752.51	753.51	749.66	750.06	750.46	752.51	749.86	750.16	750.81
2.....	749.96	749.86	749.46	753.01	752.21	*a*	750.06	750.46	752.01	749.76	750.16	751.01
3.....	750.06	749.86	749.46	752.61	751.76	749.26	750.06	750.36	752.26	749.76	750.16	751.06
4.....	750.06	749.86	749.46	752.31	751.71	749.66	750.06	750.36	752.21	749.66	750.16	751.16
5.....	749.91	749.86	749.46	752.06	752.26	749.66	750.06	750.36	752.11	749.96	750.16	752.26
6.....	749.86	749.86	749.46	751.66	751.76	749.66	750.06	750.36	751.91	749.96	750.21	751.26
7.....	749.86	749.86	749.46	751.06	751.81	749.66	750.11	750.36	751.86	749.96	750.26	751.06
8.....	749.86	749.66	749.46	751.41	751.61	749.71	750.26	750.36	751.56	749.96	750.26	750.96
9.....	749.86	749.86	749.46	753.36	751.36	749.86	750.36	750.36	751.36	749.96	750.26	750.86
10.....	749.86	749.71	749.46	753.01	751.91	749.91	750.46	750.36	751.11	749.91	750.26	750.71
11.....	749.86	749.66	749.46	752.16	750.81	749.86	750.46	750.36	751.06	749.86	750.26	750.46
12.....	749.86	749.56	749.46	751.86	750.66	749.86	750.46	750.36	751.06	749.96	750.26	750.36
13.....	749.76	749.56	749.46	751.71	751.06	749.86	750.46	750.36	750.86	749.96	750.26	*a*
14.....	749.66	749.56	749.46	751.71	751.21	749.86	750.46	750.36	750.81	749.96	750.36	750.36
15.....	749.66	749.56	749.46	751.66	750.86	749.76	750.46	750.36	750.46	749.96	750.36	750.36
16.....	749.66	749.56	749.91	752.01	750.96	749.76	750.46	750.21	750.46	749.96	750.41	750.36
17.....	749.66	749.56	750.31	752.06	750.61	749.66	750.31	750.36	750.46	749.96	750.71	750.36
18.....	749.66	749.46	750.56	752.96	750.41	749.66	750.26	750.36	750.26	749.96	750.76	750.36
19.....	749.66	749.46	750.56	753.61	750.41	749.66	750.26	750.36	750.21	750.26	750.76	750.36
20.....	749.66	749.46	750.51	755.91	750.66	749.61	750.11	750.36	750.16	750.26	750.56	750.26
21.....	749.66	749.46	750.26	755.21	750.31	*a*	750.21	751.26	750.16	750.26	750.56	750.16
22.....	749.66	749.46	750.26	753.66	750.26	749.96	750.36	752.81	750.16	750.26	750.56	750.16
23.....	749.56	749.46	750.01	753.06	750.06	749.86	750.36	751.86	750.16	750.06	750.66	750.06
24.....	749.61	749.46	749.86	752.61	749.86	749.76	750.36	751.86	750.76	750.06	750.76	750.01
25.....	749.66	749.46	749.66	751.51	750.86	749.66	750.36	752.06	750.91	749.86	750.76	749.96
26.....	749.66	749.46	750.06	752.56	749.66	749.66	750.36	751.86	750.36	749.96	750.76	749.96
27.....	749.66	749.46	750.41	752.66	749.66	749.66	750.36	751.76	750.16	749.96	750.76	749.96
28.....	749.76	749.46	751.71	753.01	749.66	749.56	750.41	751.66	750.06	749.96	750.76	749.91
29.....	749.81	......	752.56	753.51	749.66	749.46	750.46	752.26	750.06	749.96	750.76	749.86
30.....	749.96	......	752.46	753.51	749.66	749.76	750.46	752.91	750.06	749.96	750.76	749.86
31.....	749.96	......	752.36	......	749.66	......	750.46	753.01	......	749.96	......	749.86

a No reading; dam of Hinckley closed.

West Canada Creek at Power Dam, Trenton Falls

This gaging station, which is located at the dam of the Utica Gas and Electric Company, was established February 8, 1904, by this Department. The gage board is secured to face of dam in a vertical position and is placed above the water-surface, the readings being taken by means of chain and plumb-bob passing on pulley over top of gage. The observations are taken by placing plumb-bob at water-surface and reading the gage at a point marked on chain ten feet above plumb-bob. The elevation of zero of gage is 1,009.56, to which all readings are added. The gage is graduated in feet and inches and is read twice each day by C. W. Young.

The dam is of concrete with masonry coping and has a spillway 97.9 feet long. Another spillway, or by-pass, two feet lower than crest of main spillway allows the water to pass through a rock channel on each side of dam. The crest of this lower spillway is 163.4 feet long at an elevation of 1,007.12. The discharge over the two spillways has been calculated by means of the weir formula, using coëfficients derived from the United States Geological Survey experiments.

The discharge diverted by the Power Company has been computed from diagrams expressing the flow as a function of the kilowatts used. These diagrams were made from tests made by the Power Company to determine the discharging capacity of the turbines, which are of a special design. These tests were made by computing the discharge over weirs placed in the tail-race.

A daily record is kept of the total kilowatts used in twenty-four hours, also the number of hours every day each turbine runs, there being four turbines in all.

The pondage above the Trenton Falls dam is very limited and the operation of the generators during low water has to be adjusted according to the condition of inflow. The inflow is controlled by pondage above Hinckley. Owing to irregularity of operation during low water, the Trenton Falls record is considered approximate only for the low-water period.

Owing to the drawing down of the pond above the Trenton Falls dam, the average elevation of the water-surface in the pond deduced from two daily readings, is roughly approximate only. The pond level fluctuates often as much as 10 feet during 24 hours in the low-water season. In connection with the calculated discharge at Trenton Falls it may be stated that there are a variety of conditions which tend to limit the accuracy obtainable. A comparison of the run-off per square mile as computed for 1914 at Trenton Falls, with that obtained at Wilmurt above, and Poland and Kast Bridge below, would indicate as follows: for June to November inclusive, good; for December, fair; for April and May, incorrect, cause unknown; for January to March inclusive, no basis of comparison. The discharge at this station has been computed by the same methods as used in former years and the months of doubtful accuracy are included because of possible comparative value.

The drainage area at the point of gaging is 375.8 square miles.

Daily Elevation of Water-surface (B. C. Datum) of West Canada Creek above Power Dam, Trenton Falls

1914	Jan.	Feb.	Mar.	April	May	June
1	1,019.06	1,019.56	1,018.90	1,019.73	1,020.23	1,012.02
2	1,017.90	1,018.60	1,017.73	1,020.06	1,019.40	983.27
3	1,019.10	1,018.69	1,018.77	1,020.19	1,019.73	1,006.06
4	1,019.27	1,018.73	1,018.81	1,019.52	1,018.94	1,018.44
5	1,018.52	1,018.98	1,018.48	1,019.23	1,019.98	1,019.23
6	1,017.94	1,018.36	1,018.65	1,018.40	1,019.73	1,019.44
7	1,018.10	1,018.90	1,018.60	1,018.31	1,019.69	1,019.52
8	1,018.02	1,019.31	1,018.90	1,018.90	1,018.90	1,019.19
9	1,017.90	1,018.15	1,018.36	1,020.65	1,018.02	1,019.36
10	1,018.90	1,017.90	1,017.65	1,020.98	1,018.65	1,019.52
11	1,018.98	1,017.69	1,017.86	1,019.27	1,018.81	1,019.48
12	1,018.31	1,018.56	1,017.94	1,019.65	1,017.98	1,019.31
13	1,016.52	1,018.27	1,018.36	1,018.77	1,018.81	1,019.73
14	1,018.19	1,018.19	1,018.36	1,019.02	1,018.69	1,019.23
15	1,017.90	1,019.27	1,019.15	1,019.10	1,018.44	1,013.36
16	1,018.48	1,019.06	1,017.69	1,019.60	1,018.56	1,010.69
17	1,018.65	1,019.06	1,017.44	1,019.19	1,018.44	1,011.48
18	1,018.90	1,019.10	1,017.36	1,020.27	1,018.06	1,015.23
19	1,018.48	1,019.02	1,017.19	1,020.77	1,017.10	1,013.73
20	1,018.40	1,018.90	1,016.81	1,023.69	1,018.02	1,106.81
21	1,018.06	1,018.81	1,017.40	1,022.94	1,017.69	1,016.06
22	1,018.02	1,019.23	1,017.90	1,021.06	1,017.52	1,015.73
23	1,017.98	1,018.90	1,017.27	1,020.10	1,017.48	1,017.40
24	1,018.31	1,018.60	1,017.19	1,020.23	1,017.77	1,014.36
25	1,019.15	1,018.40	1,017.19	1,019.23	1,017.31	1,014.02
26	1,018.52	1,018.48	1,017.36	1,020.10	1,017.23	1,013.36
27	1,018.36	1,018.56	1,018.15	1,020.10	1,017.15	1,014.52
28	1,018.44	1,018.52	1,018.81	1,020 40	1,015.81	1,015.15
29	1,018.56	....	1,020.10	1,020.90	1,013.77	1,013.98
30	1,018.90	....	1,019.86	1,020.77	1,017.56	1,016.36
31	1,019.23	....	1,019.65	....	1,017.48	....

Daily Elevation of Water-surface (B. C. Datum) of West Canada Creek above Power Dam, Trenton Falls — (Continued)

1914	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1,015.98	1,016.65	1,019.94	1,011.06	1,016.77	1,019.60
2	1,016.44	1,014.40	1,019.73	1,016.23	1,015.65	1,019.86
3	1,016.19	1,016.44	1,019.98	1,016.23	1,016.69	1,020.06
4	1,015.10	1,013.69	1,020.02	1,007.90	1,015.48	1,020.19
5	1,018.56	1,017.86	1,019.90	1,014.98	1,015.44	1,020.19
6	1,017.06	1,017.60	1,019.81	1,014.69	1,016.36	1,020.27
7	1,016.10	1,017.56	1,019.90	1,011.36	1,018.06	1,019.98
8	1,015.69	1,017.48	1,019.48	1,014.44	1,018.52	1,019.86
9	1,016.86	1,014.94	1,016.06	1,013.81	1,018.15	1,019.56
10	1,019.31	1,015.56	1,018.10	1,016.69	1,017.36	1,019.48
11	1,019.31	1,013.77	1,018.73	1,012.94	1,016.06	1,015.40
12	1,019.52	1,011.06	1,019.23	1,010.27	1,014.23	1,019.15
13	1,017.98	1,017.15	1,006.73	1,014.44	1,015.31	1,017.98
14	1,018.19	1,016.86	1,013.94	1,014.15	1,017.10	1,019.36
15	1,018.65	1,017.27	1,017.60	1,014.36	1,019.56	1,019.27
16	1,103.06	1,017.44	1,014.90	1,014.65	1,019.52	1,018.44
17	1,009.40	1,014.19	1,012.77	1,016.77	1,019.90	1,016.19
18	1,017.94	1,015.48	1,013.27	1,016.02	1,020.31	1,016.31
19	1,018.90	1,015.44	1,016.27	1,015.36	1,020.31	1,018.52
20	1,016.02	1,015.23	1,011.23	1,019.15	1,020.15	1,019.48
21	1,017.15	1,018.73	1,013.65	1,019.23	1,019.98	1,016.90
22	1,013.52	1,019.23	1,015.98	1,019.19	1,019.94	1,015.77
23	1,007.10	1,019.48	1,106.06	1,017.86	1,019.65	1,016.10
24	1,016.94	1,019.19	1,019.44	1,017.56	1,019.52	1,016.40
25	1,018.81	1,019.44	1,018.60	1,018.15	1,019.60	1,019.19
26	1,014.86	1,019.15	1,018.48	1,011.69	1,019.65	1,018.77
27	1,014.36	1,013.23	1,017.52	1,016.15	1,019.52	1,020.06
28	1,013.94	1,011.10	1,013.52	1,016.36	1,019.56	1,018.48
29	1,015.36	1,019.56	1,013.23	1,015.86	1,019.65	1,017.95
30	1,013.94	1,020.44	1,014.48	1,016.02	1,019.52	1,018.56
31	1,013.48	1,020.23	....	1,017.81	....	1,019.19

Daily Discharge, in Second-feet, of West Canada Creek at Power Dam, Trenton Falls

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	**Dec.**
1	187	461	174	895	1,504	248	254	108	931	159	95	**609**
2	253	283	174	1,261	551	24	209	127	740	135	236	**866**
3	234	276	199	1,464	743	72	226	217	966	183	248	**1,090**
4	237	312	201	639	369	216	143	148	1,014	109	240	**1,271**
5	260	328	188	340	1,113	343	195	134	852	160	245	**1,264**
6	236	289	192	341	872	466	220	155	668	190	272	**1,281**
7	236	298	188	336	822	404	232	141	777	190	270	**989**
8	241	313	175	392	369	304	245	154	496	157	164	**864**
9	239	236	179	2,165	274	403	244	129	294	168	194	**573**
10	284	237	175	2,733	245	515	373	151	283	176	297	**498**
11	205	223	168	472	365	489	321	144	299	148	285	**285**
12	232	227	169	691	318	382	376	131	321	171	265	**269**
13	209	187	173	321	373	694	266	215	122	142	246	**132**
14	191	180	173	396	357	195	290	162	272	172	241	**422**
15	200	270	176	397	282	272	291	129	298	160	433	**378**
16	225	219	176	747	317	212	272	83	289	152	398	**307**
17	225	217	209	458	220	185	193	163	219	203	907	**299**
18	190	218	247	1,556	302	182	186	156	191	157	1,438	**275**
19	209	213	259	2,245	266	176	157	162	181	272	1,456	**280**
20	209	204	234	9,374	303	64	192	214	123	285	1,219	**402**
21	199	200	208	7,236	299	44	219	215	179	345	975	**277**
22	197	254	131	2,885	289	206	183	293	181	320	829	**276**
23	206	197	220	1,326	255	222	167	329	233	302	666	**195**
24	218	189	237	1,508	167	195	221	306	477	263	535	**263**
25	222	184	239	452	285	173	188	472	292	149	615	**185**
26	245	187	286	1,188	287	172	123	293	250	244	575	**231**
27	261	188	335	1,320	292	188	152	273	132	177	500	**969**
28	276	185	296	1,748	291	104	153	202	235	187	538	**249**
29	274	......	1,201	2,591	263	144	204	550	197	199	541	**251**
30	327	......	1,036	2,363	211	227	196	1,471	204	194	519	**261**
31	335	......	805	......	158	......	154	1,301	......	215	......	**307**
Mean	234	242	285	1,661	412	251	221	282	391	196	514	**510**

Monthly Discharge of West Canada Creek at Power Dam, Trenton Falls
[Drainage area, 376 square miles]

1914	**DISCHARGE IN SECOND-FEET**				**RUN-OFF**
	Maximum	**Minimum**	**Mean**	**Per square mile**	**Depth in inches on drainage area**
January	**335**	**187**	**234**	**0.622**	**0.717**
February	**461**	**180**	**242**	**0.644**	**0.671**
March	**1,201**	**131**	**285**	**0.758**	**0.874**
April	**9,374**	**321**	**1,661**	**4.418**	**4.929**
May	**1,504**	**158**	**412**	**1.10**	**1.268**
June	**694**	**24**	**251**	**0.668**	**0.745**
July	**376**	**123**	**221**	**0.588**	**0.678**
August	**1,471**	**83**	**282**	**0.750**	**0.865**
September	**1,014**	**122**	**391**	**1.04**	**1.160**
October	**345**	**109**	**196**	**0.521**	**0.601**
November	**1,456**	**95**	**514**	**1.367**	**1.525**
December	**1,281**	**132**	**510**	**1.356**	**1.563**
The year	**9,374**	**24**	**432**	**1.149**	**15.596**

WEST CANADA CREEK AT TWIN ROCK BRIDGE, NEAR GRANT

This station was established September 7, 1900, by the United States Geological Survey in coöperation with the Utica Gas and Electric Company. It has since been taken over and maintained by this Department. The gage is located on the Twin Rock bridge over West Canada creek about two miles northwest of Grant on the road from Grant to the Hinckley-Northwood road.

As the bridge will be submerged by the Hinckley reservoir, this station was abandoned December 31, 1914.

Daily Gage Height, in Feet, of West Canada Creek at Twin Rock Bridge, near Grant

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	31.76	32.19	31.49	36.28	37.01	31.91	40.20	40.42	41.82	35.82	36.84	40.66
2.....	31.60	32.07	31.51	37.17	35.48	33.30	40.22	40.42	40.82	35.72	36.84	43.10
3.....	31.76	32.00	31.54	37.14	36.80	35.66	40.36	40.40	41.82	35.64	37.05	46.76
4.....	31.82	32.11	31.61	35.62	35.61	36.54	40.44	40.42	42.27	35.83	37.08	47.84
5.....	31.83	32.28	31.56	34.68	37.38	37.88	40.19	40.42	42.20	35.88	37.22	47.25
6.....	31.64	32.07	31.54	33.77	36.55	37.98	40.34	40.49	40.42	35.90	37.60	46.06
7.....	31.74	32.00	31.54	33.93	36.78	37.56	40.74	40.54	40.04	35.80	37.88	44.62
8.....	31.73	31.92	31.54	34.71	34.82	37.50	41.04	40.56	40.00	35.82	37.94	43.42
9.....	31.74	31.78	31.54	38.32	34.34	38.24	41.26	40.52	40.41	35.85	37.98	42.72
10.....	31.79	31.81	31.56	36.80	34.98	38.46	41.22	40.53	40.55	35.88	37.75	42.16
11.....	31.74	31.70	31.53	35.15	34.00	38.48	40.77	40.58	40.36	36.06	37.51	41.74
12.....	31.59	31.54	31.48	35.14	33.48	37.57	40.76	40.58	40.34	36.18	37.41	41.61
13.....	31.45	31.56	31.55	34.28	34.94	37.00	40.92	40.48	40.42	36.20	37.37	41.78
14.....	31.49	31.60	31.48	34.58	34.49	36.65	41.02	40.32	40.46	36.17	37.83	41.16
15.....	31.52	31.60	31.52	34.76	34.20	36.29	40.88	40.28	41.20	35.14	38.44	40.10
16.....	31.58	31.64	31.58	35.40	34.34	36.10	40.64	40.42	40.89	36.16	40.65	39.44
17.....	31.62	31.71	31.80	35.00	33.79	35.96	40.72	40.42	40.50	36.27	*a*	38.86
18.....	31.56	31.68	32.14	36.88	33.47	35.99	40.88	40.48	40.28	36.83	*a*	38.78
19.....	31.56	31.66	32.03	38.28	33.54	36.05	40.92	40.62	40.09	37.25	*a*	38.56
20.....	31.62	31.60	31.96	43.68	33.38	37.21	40.80	40.60	39.92	38.34	47.12	38.36
21.....	31.56	31.58	31.94	43.58	32.89	39.21	40.42	41.09	39.92	38.52	44.98	38.18
22.....	31.55	31.58	31.84	38.91	32.50	39.66	40.34	41.66	40.10	38.28	43.58	38.06
23.....	31.58	31.56	31.80	37.20	32.38	39.66	40.30	41.54	40.14	38.79	42.20	37.97
24.....	31.54	31.54	31.74	37.42	32.52	39.62	40.29	41.49	38.46	37.41	40.95	37.97
25.....	31.68	31.56	31.74	36.92	32.34	39.68	40.38	41.80	37.64	37.05	40.12	38.00
26.....	31.88	31.56	32.06	36.42	32.16	39.70	40.56	41.42	36.78	36.79	39.57	37.90
27.....	31.85	31.54	33.00	37.14	32.13	39.64	40.66	41.32	36.27	36.54	39.42	37.82
28.....	31.81	31.56	35.10	38.20	32.10	39.64	40.64	41.30	36.11	36.45	40.14	37.74
29.....	31.94	......	37.00	38.38	32.04	39.90	40.50	41.12	36.03	36.46	40.62	37.78
30.....	32.10	......	36.68	38.66	31.88	40.22	40.42	43.73	35.90	36.57	40.56	38.02
31.....	32.21	......	36.24	......	31.80	......	40.42	43.14	......	36.75	......	38.48

a No record; water over bridge flow. Zero of gage is at El. 1,135.07, Barge canal datum.

WEST CANADA CREEK AT WILMURT

A gaging station was established at the highway bridge crossing West Canada creek at Wilmurt on June 28, 1909, by this Department. A weight-and-chain gage reads in feet and tenths from zero to 8 feet. This is attached to the bridge on the downstream side. In addition, a 5-foot section, reading from 10 feet to 15 feet, is attached to a telegraph pole near the Flansburgh residence. The cross-section of the stream at the location of the gage is not favorable for purposes of measurement in low water. It can be utilized at certain stages of the stream and low-water measurements can be obtained at a more favorable cross-section located a short distance downstream. The observer is Louis Fagan, by whom gage readings are taken at 7 A. M. and 4 P. M. each day. This gaging station can be reached only by driving a distance of several miles from Prospect or Hinckley. The drainage area at the gaging station is 198 square miles. The gage is located above the limit of backwater from the proposed Hinckley reservoir, which is being constructed in connection with the State Barge canal.

This station was abandoned December 31, 1914.

Current-meter Discharge Measurements of West Canada Creek at Wilmurt

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
April 14	Wallace & Fogarty	4.02	1,284
June 17	Leggett & Scully	2.10	120

Daily Elevation of Water-surface (Arbitrary Datum) of West Canada Creek at Wilmurt

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	102.07	102.82	102.52	104.57	105.67	102.07	102.02	101.72	102.87	101.72	102.12	103.02
2......	102.27	102.82	102.52	105.07	105.67	102.02	101.97	101.72	102.72	101.72	101.97	104.12
3......	102.42	102.82	102.52	104.72	104.72	102.12	101.92	101.72	103.47	101.82	101.87	104.37
4......	102.42	102.82	102.52	104.07	103.97	102.47	101.92	101.77	102.97	101.72	101.87	103.82
5......	102.42	102.82	102.52	103.72	104.62	102.57	102.07	101.72	102.82	101.72	101.97	103.17
6......	102.42	102.72	102.52	103.37	105.22	102.47	102.17	101.72	102.82	101.72	102.07	102.87
7......	102.42	102.72	102.52	103.32	104.57	102.27	102.07	101.62	102.87	101.72	102.17	102.67
8......	102.42	102.72	102.52	104.42	104.02	102.57	102.22	101.62	102.67	101.72	102.12	102.67
9......	102.42	102.62	102.57	106.22	103.27	102.57	102.22	101.52	102.47	101.72	102.07	102.57
10......	102.32	102.62	102.62	104.82	103.12	102.37	102.12	101.52	102.32	101.72	102.02	102.42
11......	102.32	102.52	102.62	104.67	103.17	102.27	102.32	101.62	102.22	101.72	102.02	102.32
12......	102.32	102.52	102.62	104.67	102.97	102.17	102.42	101.72	102.12	101.72	102.07	102.32
13......	102.22	102.62	102.62	104.27	103.17	102.02	102.52	101.62	102.12	101.72	102.47	102.27
14......	102.22	102.72	102.62	103.67	103.42	101.97	102.42	101.62	102.22	101.72	103.42	102.22
15......	102.32	102.72	102.62	103.87	103.37	101.92	102.22	101.62	102.32	101.72	104.27	102.22
16......	102.32	102.67	102.62	104.42	103.17	101.92	102.07	101.62	102.17	101.72	104.62	102.12
17......	102.32	102.62	102.62	103.67	102.92	101.92	102.07	101.62	102.12	101.87	104.12	102.12
18......	102.32	102.52	102.52	104.92	102.82	101.92	102.17	101.52	101.97	101.97	103.67	102.12
19......	102.32	102.52	102.57	106.07	102.72	102.02	102.02	101.62	101.82	102.42	103.42	102.12
20......	102.32	102.52	102.62	108.67	102.72	101.97	101.87	101.67	101.77	102.62	103.12	102.12
21......	102.32	102.52	102.62	107.12	102.62	101.92	101.72	102.47	101.72	102.52	102.87	102.22
22......	102.32	102.52	102.62	105.82	102.52	101.92	101.82	102.37	101.72	102.37	102.27	102.22
23......	102.32	102.42	102.62	104.72	102.62	101.92	101.87	102.17	101.72	102.17	101.82	102.27
24......	102.47	102.47	102.67	103.82	102.52	101.92	102.02	102.12	101.72	102.07	101.87	102.32
25......	102.47	102.52	102.77	104.87	102.42	101.82	101.92	102.37	101.72	101.97	102.07	102.32
26......	102.42	102.52	103.02	104.57	102.32	101.72	101.82	102.12	101.77	101.92	102.52	102.32
27......	102.47	102.52	103.37	105.22	102.32	101.62	101.72	102.02	101.92	101.92	102.77	102.12
28......	102.57	102.52	104.12	105.92	102.27	101.67	101.72	102.07	101.92	101.92	102.82	102.12
29......	102.67	......	104.47	106.02	102.22	101.87	101.72	103.07	101.92	102.07	102.92	102.17
30......	102.72	......	104.52	105.42	102.22	102.07	101.72	103.77	101.82	102.22	102.77	102.27
31......	102.82	......	104.42	......	102.12	......	101.67	103.22	......	102.12	......	102.17

Daily Discharge, in Second-feet, of West Canada Creek at Wilmurt

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	......	......	......	2,220	3,970	91	76	30	510	30	106	616
2......	......	......	......	2,980	3,970	76	66	30	413	30	66	1,640
3......	......	......	......	2,440	2,440	106	57	30	967	41	49	1,950
4......	......	......	......	1,590	1,470	259	57	35	580	30	49	1,300
5......	......	......	......	1,200	2,290	318	91	30	477	30	66	728
6......	......	......	......	884	3,230	259	124	30	477	30	91	510
7......	......	......	......	844	2,220	162	91	24	510	30	124	379
8......	......	......	......	2,020	1,530	318	143	24	379	30	106	379
9......	......	......	......	4,890	805	318	143	20	259	30	91	318
10......	......	......	......	2,590	691	208	106	20	184	30	76	233
11......	......	......	......	2,370	728	162	184	24	143	30	76	184
12......	......	......	......	2,370	580	124	233	30	106	30	91	184
13......	......	......	......	1,820	728	76	289	24	106	30	259	162
14......	......	......	......	1,150	924	66	233	24	143	30	924	143
15......	......	......	......	1,360	884	57	143	24	184	30	1,820	143
16......	......	......	......	2,020	728	57	91	24	124	30	2,290	106
17......	......	......	......	1,150	545	57	91	24	106	49	1,640	106
18......	......	......	......	2,740	478	57	124	20	66	66	1,150	106
19......	......	......	......	4,640	413	76	76	24	41	233	924	106
20......	......	......	......	8,950	413	66	49	27	35	348	691	106
21......	......	......	......	6,380	348	57	30	259	30	289	510	143
22......	......	......	......	4,220	289	57	41	208	30	208	162	143
23......	......	......	......	2,440	348	57	49	124	30	124	41	162
24......	......	......	......	1,300	289	57	76	106	30	91	49	184
25......	......	......	......	2,660	233	41	57	208	30	66	91	184
26......	......	......	......	2,220	184	30	41	106	35	57	289	184
27......	......	......	......	3,230	184	24	30	76	57	57	443	106
28......	......	......	......	4,390	162	27	30	91	57	57	477	106
29......	......	......	......	4,550	143	49	30	653	57	91	545	124
30......	......	......	......	3,560	143	91	30	1,250	41	143	443	162
31......	......	......	......	......	106	......	27	766	......	106	......	124
Mean...	......	......	......	2,839	1,015	113	94	141	207	80	458	356

NOTE.— January 1 to March 31, ice period, discharge not available for publication. Discharge on April 9, 19 to 22, 27 to 30, inclusive, May 1, 2, and 6 estimated by extending rating curve.

Monthly Discharge of West Canada Creek at Wilmurt
[Drainage area, 198 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
April	8,950	844	2,839	14.34	16.00
May	3,970	106	1,015	5.13	5.91
June	318	24	113	0.571	0.64
July	289	27	94	0.475	0.55
August	1,250	20	141	0.712	0.82
September	967	30	207	1.05	1.17
October	348	30	80	0.404	0.47
November	2,290	41	458	2.31	2.58
December	1,950	106	356	1.80	2.07

NINE-MILE CREEK

NINE-MILE CREEK NEAR STITTVILLE

A gaging station was established at Powell's bridge, one mile below the village of Stittville, November 4, 1905, by this Department. Observations of the stage of the stream are taken each morning and afternoon by Mrs. Raymer Powell, from a weight-and-chain gage attached to the bottom chord on the downstream side of the bridge.

Nine-Mile creek drains a large portion of the territory on the north side of the Mohawk between Utica and Rome, emptying into the latter stream near Oriskany. It will be used as a feeder for the diversion of water from West Canada creek to the Rome summit level of the improved Erie canal. The drainage area above the station is 59 square miles.

A gaging station was maintained at this point by the U. S. Deep Waterways Commission during their survey in 1898. At that time there was a dam about 200 feet below the bridge, which has since been destroyed, leaving the flow unimpeded. The channel is of rock, of uniform cross-section and straight for several hundred feet each way from the bridge and the conditions are favorable for current-meter discharge measurements, except in times of very low water. Measurements are made from the upstream side of the bridge.

Owing to the sluggish velocity at low stages the record for very low-water conditions is considered to be roughly approximate only.

Daily Elevation of Water-surface (B. C. Datum) of Nine-Mile Creek near Stittville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	484.02	485.12	484.22	485.12	484.27	483.92	484.02	*a*	484.02	483.92	484.02	484.92
2	484.02	485.17	484.22	485.17	484.12	483.92	484.07	483.92	484.12	483.92	484.07	484.97
3	484.02	485.27	484.22	485.27	484.22	483.92	484.12	483.92	484.87	483.97	484.12	484.97
4	484.07	485.32	484.22	485.27	484.12	483.97	484.02	483.92	484.47	484.02	484.37	484.92
5	484.12	485.22	484.22	485.97	483.97	484.07	484.12	483.82	484.07	484.07	484.12	484.02
6	484.12	484.42	484.22	486.02	483.92	484.32	483.97	483.82	484.02	484.07	484.12	484.02
7	484.17	484.42	484.22	486.07	484.07	484.12	484.02	483.82	484.87	483.97	484.12	484.07
8	484.22	484.22	484.22	486.17	484.02	484.97	483.92	483.82	484.57	483.92	484.12	484.87
9	484.22	484.22	484.22	486.22	484.02	484.92	483.92	483.82	484.22	483.92	484.17	484.92
10	484.22	484.22	484.22	485.47	483.97	484.82	483.92	483.82	484.37	483.92	484.17	484.92
11	484.22	484.22	484.22	485.37	483.97	483.87	483.92	483.82	484.02	483.92	484.22	484.92
12	484.22	484.22	484.22	485.32	484.07	483.92	483.92	483.82	483.92	483.92	484.22	484.92
13	484.22	484.22	484.22	485.17	484.07	483.92	483.82	483.92	483.97	483.92	484.27	484.92
14	484.22	484.22	484.22	485.07	484.12	483.92	483.82	483.92	484.02	484.02	484.82	484.92
15	484.22	484.22	484.32	485.27	484.17	483.92	483.82	483.92	484.02	484.02	484.92	484.92
16	484.22	484.22	484.37	485.17	484.22	483.82	483.82	483.92	483.92	484.07	484.97	484.92
17	484.22	484.22	484.67	485.07	484.22	483.82	483.92	483.92	483.92	484.07	484.47	484.92
18	484.22	484.22	484.92	485.12	484.22	482.92	483.92	484.02	483.82	484.07	483.92	484.92
19	484.22	484.22	484.82	485.17	484.07	482.92	483.92	484.07	483.82	484.02	483.92	484.92
20	484.22	484.22	484.82	485.27	484.02	482.92	484.02	484.17	483.82	483.92	483.92	484.92
21	484.22	484.22	484.82	485.27	484.02	483.92	483.92	484.17	483.82	483.92	483.92	484.92
22	484.22	484.22	484.02	485.37	484.07	484.02	483.92	484.22	483.82	483.92	483.92	484.92
23	484.22	484.22	484.02	485.22	484.12	484.07	483.92	484.27	483.92	484.02	483.92	484.92
24	484.22	484.22	485.07	485.12	484.02	484.12	483.92	484.22	483.92	484.02	483.92	484.92
25	484.22	484.22	485.17	485.02	484.02	484.17	483.92	484.22	483.92	484.02	483.92	484.92
26	484.22	484.22	487.07	485.02	484.07	484.17	483.92	484.27	484.02	484.02	484.97	484.92
27	484.22	484.22	487.67	485.07	483.97	484.12	483.92	484.32	484.07	484.07	485.02	484.92
28	484.27	484.22	487.72	485.02	483.92	484.17	483.82	484.22	484.02	484.12	485.07	484.92
29	484.97	......	488.17	484.87	483.92	484.22	483.82	484.27	484.02	484.17	485.07	484.92
30	485.07	......	488.27	484.17	483.92	484.17	483.82	484.32	483.97	484.17	485.12	484.92
31	485.12	......	488.37	......	483.92	......	483.82	484.17	......	484.27	......	484.92

a No record.

Daily Discharge, in Second-feet, of Nine-Mile Creek near Stittville

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	56	384	97	384	108	37	56	*a*	56	37	56	299
2	56	408	97	408	75	37	65	37	75	37	65	318
3	56	462	97	462	97	37	75	37	280	46	75	31 8
4	65	492	97	462	75	46	56	37	157	56	132	299
5	75	434	97	1,508	46	65	75	19	65	65	75	56
6	75	144	97	1,611	37	120	46	19	56	65	75	56
7	86	144	97	1,714	65	75	56	19	280	46	75	65
8	97	97	97	1,915	56	318	37	19	184	37	75	280
9	97	97	97	2,016	56	299	37	19	97	37	86	299
10	97	97	97	590	46	262	37	19	132	37	86	299
11	97	97	97	524	46	28	37	19	56	37	97	299
12	97	97	97	492	65	37	37	19	37	37	97	299
13	97	97	97	408	65	37	19	37	46	37	108	299
14	97	97	97	360	75	37	19	37	56	56	262	299
15	97	97	120	462	86	37	19	37	56	56	299	299
16	97	97	132	408	97	19	19	37	37	65	318	299
17	97	97	213	360	97	19	37	37	37	65	157	299
18	97	97	299	384	97	7	37	56	19	65	37	299
19	97	97	262	408	65	7	37	65	19	56	37	299
20	97	97	262	462	56	7	56	86	19	37	37	299
21	97	97	262	462	56	37	37	86	19	37	37	299
22	97	97	56	524	65	56	37	97	19	37	37	299
23	97	97	56	434	75	65	37	108	37	56	37	299
24	97	97	360	384	56	75	37	97	37	56	37	299
25	97	97	408	338	56	86	37	97	37	56	37	299
26	97	97	*b*3,000	338	65	86	37	108	56	56	318	299
27	97	97	*b*3,000	360	46	75	37	120	65	65	338	299
28	108	97	*b*3,000	338	37	86	19	97	56	75	360	299
29	318	......	*b*3,000	280	37	97	19	108	56	86	360	299
30	360	......	*b*3,000	86	37	86	19	120	46	86	384	299
31	384	......	*b*3,000	......	37	......	19	86	......	108	......	299
Mean	115	161	703	629	65	76	38	59	73	55	140	276

a No record. *b* Limit rating curve; actual discharge greater.

Monthly Discharge of Nine-Mile Creek near Stittville
[Drainage area, 59 square miles]

1914	Discharge in Second-feet				Run-off
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area
January	384	56	115	1.95	2.25
February	492	97	161	2.73	2.84
March	b 3,000	56	703	11.92	13.74
April	2,016	86	629	10.66	11.90
May	108	37	65	1.10	1.27
June	318	7	76	1.29	1.44
July	75	19	38	0.64	0.74
August	120	19	59	1.00	1.15
September	280	19	73	1.24	1.38
October	108	37	55	0.933	1.08
November	384	37	140	2.37	2.64
December	318	56	276	4.68	5.40
The year	b 3,000	7	199	3.373	45.83

b Limit rating curve; actual discharge greater.

PRECIPITATION RECORDS, MOHAWK BASIN

Rain gages have been maintained by this Department, and others when so indicated on the record, at several places on the Mohawk drainage area. Precipitation records have been kept as follows:

Daily Precipitation, in Inches, at Tribes Hill

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1		0.20	0.50	1.40								
2				0.70			1.10		0.20			1.01
3									0.40			
4						1.90		0.20				
5					1.20							
6		0.30										
7		0.20	0.40			0.30	2.10					
8	0.10			2.40		0.60						
9	0.20										0.90	
10												
11				1.40								
12					1.60						0.20	
13												
14		3.10									0.30	0.40
15												
16	0.40			1.10			0.90			T	1.40	
17							0.20			2.10	0.60	
18			0.40					0.90				
19								1.20		0.90		
20	0.50			2.80				T			0.60	0.50
21	0.60							1.90			0.40	T
22					0.60			0.80				0.90
23							1.20					0.10
24	0.50								0.20			0.10
25	0.20								1.20			
26				1.80								
27	0.20		1.00									
28			1.40					1.90				
29				0.60					0.30			
30			1.10			2.20		1.70				0.20
31	1.60											
Total	4.30	3.80	4.80	11.90	3.40	5.00	5.50	8.60	2.30	3.00	4.40	3.21
Year												61.11

NOTE.— United States Weather Bureau record. T means trace.

Daily Precipitation, in Inches, at Geneva St. Bridge, Utica

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1		0.22										0.09
2		0.10	0.65	0.60			0.41					0.50
3				0.08				0.24	0.33		0.12	0.03
4						0.65			0.04			
5				0.16	0.67	0.08					0.11	
6				0.07	0.15		0.07				0.05	
7		0.10	0.30	0.19			0.12		0.30			
8	0.04	0.03		0.63		0.92	0.90	0.22				0.09
9	0.07			0.77			0.07				0.18	
10	0.20	0.10										0.22
11	0.11				0.02		0.36			0.11	0.06	0.06
12				0.30	0.01							
13					1.30							
14		1.65			0.08						0.12	0.89
15		0.88						0.75		0.02	0.02	
16	0.08			0.30						0.20	0.47	
17	0.30	0.04		0.15		0.14				0.31	0.10	
18	0.07		0.04				0.67	0.49			0.11	
19			0.31				0.09	0.34		0.28		
20	0.10		0.21	0.50		0.56		0.04		0.20	0.38	0.14
21	0.21			0.40			0.06	0.80				0.75
22	0.04							0.42			0.18	0.27
23		0.14			0.27							0.19
24							0.44	0.70	0.12		0.03	0.06
25					0.02		0.12		0.14			
26	0.02			0.41	0.05				0.12			
27	0.20		0.17	0.29					0.19			
28			0.07				0.09	0.16				
29			0.01			0.64		0.68				
30	0.02		0.02	0.05	0.06	0.05		0.95	0.10	0.13		0.11
31	0.42		0.37	0.30				0.12		0.01		0.03
Total	1.88	3.26	2.15	5.20	2.63	3.04	3.40	5.91	1.34	1.26	1.93	3.43
Year												35.43

NOTE.— Formerly published as " at Utica."

Daily Precipitation, in Inches, at Graefenburg (Reservoir No. 1), near Utica

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1		*0.65			0.06		0.03			0.05		0.20
2		*0.04	0.20	0.73			0.11				0.04	0.35
3		*0.01	0.03					0.29	0.38		0.12	0.02
4		*0.03		0.11		0.60			0.02			
5			0.02	0.03	0.65	0.18						
6				0.02	0.15						0.22	
7		*0.06	0.35	0.05			0.12		0.19			
8	0.03	*0.04	0.07	1.16		0.85	0.52	0.10				0.15
9		*0.05	0.13	0.79			0.08				0.35	
10	0.15		0.05				0.30					*0.10
11	0.04		0.02				0.43	0.49		T	*0.02	*0.06
12	0.03			0.37				0.06			0.04	*0.02
13			0.07		1.23						0.08	
14		1.06			0.09						0.13	*0.75
15		*0.52					0.01	0.52		0.02		
16	0.06			0.33		0.08				0.07	0.91	
17	0.15	*0.04		0.11						0.60		
18	0.08						0.69	0.52			0.04	
19		*0.05	0.53	0.01				0.32		0.30		
20	0.06	*0.02	0.07	0.70		0.52				T	*0.37	*0.19
21	0.20			0.50				2.00			*0.05	*0.22
22	0.08	*0.09		0.02			0.16	0.53				*0.22
23		*0.04			0.22						*0.04	
24			0.05				0.45	0.45	0.18			
25	0.17					0.02	0.01		0.14			*0.05
26	0.04			0.98	0.08				0.06			*0.08
27	0.03		0.03	0.12					0.11			
28			0.72				0.02	0.50		0.02		
29			0.08			1.08		0.85				
30				0.34	0.13	0.06	0.06	0.55	0.05	*0.15		*0.18
31			0.38				0.19	0.10				*0.03
Total	1.12	2.70	2.80	6.37	2.61	3.39	3.18	7.28	1.13	1.28	2.41	2.62
Year												36.8

* Snow. T means trace. Supplied by Robert E. Horton.

Daily Precipitation, in Inches, at Savage Reservoir, near Utica

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1		*0.62			0.07		0.02			0.05		0.21
2		*0.04	*0.20	0.73			0.08				0.07	0.34
3		*0.03	*0.03					0.30	0.35		0.14	0.08
4		*0.02		0.11		0.58			0.04			
5			*0.02	0.03	0.61	0.24						
6				0.02	0.16		0.04				0.17	
7		*0.06	*0.35	0.05	0.02		0.13		0.29			
8	0.02	*0.03	*0.09	1.16		0.95	0.59	0.04			0.04	0.18
9	0.02	*0.04	*0.13	0.79			0.07				0.35	
10	0.18	*0.02	*0.05			0.01	0.15					*0.08
11	0.05		*0.02				0.65	0.24		0.05	*0.05	*0.05
12				0.37	0.01			0.10			0.05	*0.02
13	0.03		*0.07	*0.01	1.29						0.07	
14		*1.06			0.11						0.14	*0.50
15		*0.52					0.02	0.64		0.04		*0.02
16	0.07	*0.02		0.31						0.09	0.90	
17	0.23	*0.05		0.12						0.59		
18	0.05	*0.02					0.65	0.70		0.02	0.04	
19		*0.06	*0.53	0.05				0.35		0.26		
20	0.10	*0.02	*0.07	0.61		0.65				0.06	*0.41	*0.19
21	0.16			0.59				1.89			*0.05	*0.17
22	0.05	*0.09		0.04			0.10	0.52				*0.18
23	0.01	*0.03			0.36						*0.04	
24			*0.05				0.43	0.70	0.10			
25	0.15					0.05	0.02		0.11			*0.07
26	0.03			0.76	0.05				0.16			*0.13
27	0.03		*0.03	0.15					0.20	*0.05		
28			0.72				0.03	0.45				
29			0.72	0.02		1.33		1.10				
30				0.27	0.08	0.11	0.07	0.80	0.07	0.14		*0.17
31	0.06		0.08		0.06		0.47	0.09		0.02		*0.03
Total	1.24	2.73	3.16	6.19	2.82	3.92	3.52	7.92	1.32	1.37	2.52	2.42
Year												39.13

* Snow. Supplied by Robert E. Horton.

Daily Precipitation, in Inches, at Deerfield Reservoir, Utica

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1		*0.31										0.26
2		*0.01	*0.10	0.71			0.12		0.05		0.05	0.26
3				0.05				0.18	0.32		0.04	0.03
4						0.68			0.09		T	
5				0.04	0.69	0.11			T		0.05	
6				0.01	0.06		0.30				0.31	
7		*0.05	*0.32	0.05	0.01		0.11		0.42			
8	*0.03	*0.05	*0.07	0.92		1.03	0.59	0.46				
9	0.04		*0.02	*0.73			0.48				0.31	
10	*0.14		*0.04									*0.04
11	*0.01						0.04	0.11		0.14	0.04	0.03
12				0.45	0.01			0.08			0.03	
13			*0.05		1.12						0.07	
14		*1.67			0.08						0.07	*0.36
15		0.28					0.08	0.35		0.04		
16	*0.03			0.31		0.02				0.17	0.43	
17	*0.18	*0.03		0.14						0.62		
18	*0.03	*0.03					0.51			0.03	0.01	
19		*0.05	*0.25							0.44		
20	*0.10			0.57		0.50	0.15			0.07	0.18	0.11
21	*0.14			0.37				0.97			0.04	0.18
22	*0.02	*0.05		0.05			0.25	0.40				0.05
23		*0.01	*0.01		0.37		0.02				0.12	
24			*0.05				0.37	0.78	0.13			
25	*0.13				0.02			0.04	0.20			0.09
26			*0.01	0.43	0.10				0.11			0.07
27	*0.03		0.26	0.02					0.23			
28	0.03		0.52				0.04	0.25		0.06		
29			0.05	0.03		0.57		0.98				
30				0.24		0.09	0.03	0.62		0.16		0.25
31	*0.24		0.35		0.15							0.03
Total	1.15	2.54	2.10	5.12	2.61	3.00	3.09	5.22	1.55	1.73	1.75	1.76
Year												31.62

* Snow. T means trace. Supplied by Robert E. Horton.

Daily Precipitation, in Inches, at Gray

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1		0.56				0.05	0.03			0.01		0.28
2		0.03	0.07	1.03			0.20	0.02	0.21		0.16	0.36
3							0.02	0.16	0.48		0.06	0.03
4		0.35				0.63			0.08			
5				0.10	0.74	0.25			0.02		0.05	
6					0.04		0.55				0.20	
7		0.03	0.31	0.10			0.12		0.37			
8			0.15	1.03		0.67	0.72	0.04				0.09
9		0.10	0.07	0.57		0.23					0.23	
10	0.50		0.04									
11	0.02				0.03		0.25	0.23		0.09	0.10	0.10
12	0.02			0.50			0.21	0.29				
13					1.24						0.20	
14		0.60	0.02		0.08						0.05	0.41
15		0.08						0.50		0.05		
16										0.11	0.90	
17	0.24		0.09	0.29			0.33	0.03		0.52	0.09	
18								0.67		0.12	0.05	
19			0.29	0.05				0.32		0.55		
20	0.11		0.01	0.77		0.52				0.09	0.28	0.62
21	0.33			0.42				1.11			0.03	0.17
22	0.05	0.18		0.05			0.13	0.89			0.05	0.24
23		0.30			0.19						0.23	0.08
24			0.05				0.42	0.44	0.13			
25	0.21					0.12			0.16			0.21
26			0.04	0.50	0.08							
27	0.04		0.19	0.21					0.23			
28	0.11		0.56				0.02	0.14	0.06			
29				0.08		0.68		0.94				
30				0.26		0.14	0.06	0.77	0.11	0.23		0.58
31			0.46		0.07		0.32			0.04		0.05
Total	1.63	2.23	2.35	5.96	2.47	3.29	3.38	6.55	1.85	1.81	2.68	3.17
Year												37.37

Supplied by Robert E. Horton.

Daily Precipitation, in Inches, at Trenton Falls

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1		0.70			T	T			T	T		0.19
2		0.08	0.18	0.29			0.20				0.16	0.42
3				0.30			0.07		1.78		0.02	0.20
4		0.28				1.04			0.12	0.08		T
5				0.62	0.67	0.15				0.10	0.07	
6				T	0.23		0.40					
7		0.15	0.39	0.05		0.87	T		0.43		T	
8		0.02	0.20	0.72	0.03		0.20	T			T	T
9	0.13	T	0.05	0.74						0.12	0.62	
10	0.20	0.02	0.03	T			0.20			0.94		0.04
11	T		T		0.03			T		0.04	0.14	T
12	0.05			0.65							T	T
13	T		T		1.20						T	
14	0.03	0.90	T		0.07						0.58	0.95
15								0.41				
16				0.28							0.58	
17	0.22	T		0.04		T		T				
18	T	T					0.23	0.85		0.08	0.10	
19			0.23	0.02			0.07	0.30		0.54		
20	0.10		0.02	0.60		0.50	T			T	0.40	0.55
21	0.30			0.32				1.55			T	0.30
22	0.04	0.28		T			0.10	0.60			0.10	0.45
23	T		T		0.24		T				0.15	0.15
24			0.08			0.15	0.52	0.55	0.20			0.08
25	0.10				T				0.12			0.07
26				0.25	0.07				0.03			
27	0.09		0.15	0.03	T				0.26			
28	0.15		0.85					0.10		T		
29			0.07	T		0.69		0.64				0.55
30			0.12	0.50		0.10	0.27	0.68	0.08	0.23		
31							0.08			T		
Total	1.41	2.43	2.37	5.41	2.68	3.50	2.34	5.68	3.02	2.13	2.92	3.95
Year												37.84

T means trace. Supplied by United States Weather Bureau in coöperation with this Department.

Daily Precipitation, in Inches, of Twin Rock Bridge, near Grant

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1		*0.63				0.06	0.07					0.22
2			*0.40	0.88			0.13	0.01	0.06		0.20	0.44
3									1.70		0.13	0.02
4		*0.35				0.65						
5				*0.09	0.78	0.07						
6					0.12		0.43				0.51	
7		*0.13	*0.35				0.08		0.39			
8				0.66		0.63						
9			*0.34	*0.70							0.33	
10		*0.07		*0.01			1.78					
11					0.07			0.45		0.50	*0.02	*0.05
12	*0.41			*0.64			0.45	0.07				
13					1.10						*0.10	
14		*0.68			0.07							*0.54
15		*0.55						0.15		0.04		
16				*0.05						0.05	0.61	
17				*0.33						0.55		
18	*0.19						0.85	0.53		0.10		
19			*0.33				0.01	0.38		0.43		
20				0.55		0.53		0.08		0.04	*0.35	*0.60
21	*0.47			0.28				1.05			*0.10	*0.10
22							0.02	0.39				*0.30
23		*0.19			0.30						*0.18	
24			*0.05				0.47					
25						0.13			0.34			
26				0.44								
27			0.32	0.03	0.10				0.24	0.07		
28			0.30					0.20		0.03		
29						0.63		0.51				
30				0.45		0.03	0.15	0.66		0.04		
31			0.36		0.10		0.19			0.02		
Total...	1.07	2.60	2.45	5.11	2.64	2.73	4.63	3.48	2.73	1.87	2.53	2.27
Year...												34.11

* Snow. This station discontinued December 31, 1914.

Daily Precipitation, in Inches, at Hoffmeister

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1		0.22	0.49	1.00		0.20		T	0.13			0.55
2			0.15				0.40	0.08	0.65		0.30	T
3						0.80			T		T	
4		0.32	0.07	0.09	0.65				0.06			
5					T		0.35				0.58	
6		0.68							0.58			
7	0.26		0.39	0.09		0.75	0.38		T	0.02		0.11
8				1.56	0.01		T		T			
9			0.07				0.34			T		
10					T		0.05	0.18		0.09		
11	0.32			0.70	T		0.10			T	T	
12					1.14			T				
13											0.43	
14		1.42					T	0.40				
15	0.13			T							1.95	
16	0.15	0.09				0.06	T	T		0.58	T	
17							0.75	0.60		0.04		
18			0.34				0.13			0.86		
19				1.30		0.41		T				
20	0.67							1.19				
21							0.20	0.50				
22		0.14			0.25							
23			0.11				0.55	0.73	0.22			
24						0.09			0.19			
25				1.07	T							
26	0.25		1.04						0.50	0.05		
27							T	T				
28				T				2.25				
29				0.55		1.12	0.30		0.03	0.21		0.70
30			0.32		0.43		0.28	0.20		T		
31	1.02											
Total...	2.80	2.87	2.98	6.36	2.48	3.43	3.83	6.13	2.36	1.85	3.26	1.36
Year...												39.71

T means trace.

DELAWARE RIVER DRAINAGE BASIN

DELAWARE RIVER

DESCRIPTION

The headwaters of Delaware river are found in Delaware, Greene and Schoharie counties, N. Y. The East branch, which may be considered the main stream, rises at Grand Gorge in northeastern Delaware county; the West branch has its source in a small lake almost on the line of Schoharie and Delaware counties, at an elevation of 1,886 feet above sea level; the two streams unite at Hancock. From this junction point the river flows southeastward until it reaches Port Jervis, where it turns to the southwest and flows for a distance of about 40 miles along the base of the Shawangunk range until it passes through the water gap, from which point it flows in an irregular southerly direction to Trenton. Below Trenton its course is in general southwestward to Delaware bay. Between Hancock and Port Jervis it forms the dividing line between New York and Pennsylvania; south of Port Jervis it separates Pennsylvania from New Jersey and, for a few miles, Delaware from New Jersey.

The drainage area of Delaware river, measured at Philadelphia and including that of Schuylkill river, is about 10,100 square miles, of which about 2,580 square miles lie in New York, 5,720 in Pennsylvania, and 1,800 in New Jersey. The river is tidal to Trenton, which lies also at the head of navigation.

The Delaware receives a number of important tributaries, among which may be mentioned Mongaup and Neversink rivers and Callicoon creek from New York; Lackawaxen, Lehigh and Schuylkill rivers and numerous creeks from Pennsylvania; and Rancocas creek, Musconetcong river and Maurice river from New Jersey.

DELAWARE RIVER AT PORT JERVIS

Location.—At the toll bridge at Port Jervis, 6 miles below the mouth of Mongaup river and 1 mile above the mouth of Neversink river, both entering from the north.

Records available.— October 12, 1904, to December 31, 1914.

Drainage area.— 3,250 square miles. (From U. S. Geological Survey water supply papers.)

Gage.— Standard chain, fastened to downstream side of bridge; read once daily. The elevation of the datum of the gage is 414.89 feet above the mean sea level.

On June 20, 1914, the chain gage was replaced by a vertical staff gage attached to the wall about 30 feet downstream from the left abutment of the bridge. A sloping staff gage extends from the foot of the vertical gage (gage height 7.6) to a point below low water (gage height 0.5).

Control.— Composed of gravel; probably permanent.

Discharge measurements.— Made from the highway bridge, except at low stages, when the left channel is measured by wading.

Winter flow.— Discharge relation is not greatly affected by ice, except during very cold winters. Ice jams sometimes occur at this station and the left channel is particularly subject to backwater from ice.

Accuracy.— Conditions of flow at this point are constant and a good discharge rating curve has been developed for all stages. Careful comparison of records at this station with those obtained at Riegelsville and the two Hancock stations indicate that all the discharge data are reliable.

Coöperation.— Gage heights furnished by the United States Weather Bureau. Discharge data obtained by the United States Geological Survey in coöperation with the State Engineer and Surveyor.

Current-meter Discharge Measurements of Delaware River at Port Jervis

DATE		Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Sept. 19 *a*......	C. S. De Golyer..................................	1.40	550
Oct. 29 *b*......	C. S. De Golyer..................................	1.90	447

a Measurement made by wading 500 feet below gage.
b Measurement made by wading 800 feet below gage; good wading station.

Daily Gage Height, in Feet, of Delaware River at Port Jervis

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	3.1	5.8	......	8.8	5.5	2.5	2.25	1.95	2.30	1.18	1.16	2.10
2......	2.9	6.5	......	8.7	5.0	2.4	2.25	1.90	2.20	1.15	1.14	1.95
3......	2.8	5.3	......	9.3	4.7	2.3	2.25	1.80	2.15	1.12	1.12	1.90
4......	2.7	5.0	......	7.8	4.5	2.3	2.15	1.70	2.20	1.11	1.18	1.95
5......	2.6	4.9	......	7.0	4.2	3.1	2.05	1.65	2.20	1.08	1.18	2.00
6......	2.6	4.8	......	6.5	4.9	3.0	2.00	1.49	2.10	1.04	1.16	2.00
7......	2.6	4.2	......	5.8	5.9	2.8	2.15	1.50	1.95	1.10	1.14	2.00
8......	2.4	4.2	......	6.0	5.2	2.6	2.10	1.50	1.90	1.25	1.13	2.20
9......	2.7	4.1	......	11.0	5.0	3.1	2.35	1.46	1.80	1.18	1.08	2.80
10......	2.4	4.1	......	9.0	4.9	2.8	2.45	1.45	1.75	1.07	1.06	2.70
11......	2.3	4.1	......	6.7	4.5	2.8	3.00	1.48	1.70	1.08	1.19	2.50
12......	2.1	2.8	......	6.7	4.6	2.5	3.50	1.80	1.55	1.02	1.20	2.40
13......	2.1	2.3	......	6.6	6.5	2.3	3.30	2.05	1.55	0.93	1.18	2.20
14......	......	2.3	......	6.0	6.5	2.2	3.00	2.05	1.48	0.99	1.17	2.15
15......	......	......	......	5.6	6.1	2.1	2.70	1.95	1.50	1.04	1.22	2.10
16......	......	......	......	5.6	5.9	2.0	2.60	1.80	1.55	1.12	1.46	2.20
17......	3.2	......	......	6.0	5.4	2.0	2.40	1.65	1.50	1.47	1.65	2.85
18......	3.1	......	......	5.8	5.0	2.0	2.55	1.65	1.39	1.70	1.95	2.80
19......	......	......	......	5.4	4.5	1.9	2.90	1.70	1.33	1.70	2.05	2.85
20......	......	......	......	5.5	4.4	1.8	2.70	1.95	1.28	1.80	1.90	2.85
21......	......	......	......	9.1	4.4	1.9	2.50	2.80	1.24	1.75	1.80	2.85
22......	......	......	......	8.4	4.1	1.8	2.20	4.10	1.15	1.75	1.65	2.90
23......	......	......	......	7.9	3.4	1.8	2.10	3.10	1.24	1.75	1.65	2.85
24......	......	......	4.9	6.0	3.2	2.5	2.15	3.00	1.36	1.55	1.65	2.80
25......	......	......	4.6	5.7	3.1	2.2	2.10	2.85	1.21	1.45	1.60	2.80
26......	......	......	4.1	5.7	2.9	2.0	2.20	2.60	1.23	1.38	1.50	2.75
27......	......	......	7.7	7.2	2.9	2.0	2.15	2.70	1.22	1.25	1.60	2.75
28......	......	......	16.0	6.4	3.1	1.9	2.05	2.25	1.17	1.24	1.75	2.75
29......	......	......	14.2	5.9	2.8	1.9	2.15	2.15	1.15	1.20	1.75	2.80
30......	......	......	9.2	5.6	2.4	2.1	2.20	2.10	1.20	1.17	2.20	2.90
31......	......	......	9.2	......	2.6	......	2.05	2.25	......	1.18	......	2.85

NOTE.— Discharge relation affected by ice, January 14 to 31, February 15 to March 23 and December 14 to 30.

Gage readings suspended during the first two periods.

Daily Discharge, in Second-feet, of Delaware River at Port Jervis

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1......	3,320	13,500	......	33,500	12,100	2,040	1,610	1,180	1,690	442	429	1,380
2......	2,860	17,400	......	32,700	9,780	1,860	1,610	1,110	1,530	422	416	1,180
3......	2,640	11,100	......	37,300	8,520	1,690	1,610	990	1,460	403	403	1,110
4......	2,430	9,780	......	26,000	7,730	1,690	1,460	880	1,530	396	442	1,180
5......	2,320	9,350	......	20,500	6,620	3,320	1,310	830	1,530	378	442	1,240
6......	2,230	8,930	......	17,400	9,350	3,080	1,240	676	1,380	354	429	1,240
7......	2,230	6,620	......	13,500	14,100	2,640	1,460	685	1,180	390	416	1,240
8......	1,860	6,620	......	14,600	10,700	2,230	1,380	685	1,110	490	410	1,530
9......	2,430	6,270	......	50,900	9,780	3,320	1,780	651	990	442	378	2,640
10......	1,860	6,270	......	35,000	9,350	2,640	1,950	642	935	372	366	2,430
11......	1,690	6,270	......	18,600	7,730	2,640	3,080	668	880	378	448	2,040
12......	1,380	2,640	......	18,600	8,120	2,040	4,380	990	732	342	455	1,860
13......	1,380	1,690	......	18,000	17,400	1,690	3,830	1,310	732	292	442	1,530
14......	......	1,690	......	14,600	17,400	1,530	3,080	1,310	668	324	436	......
15......	......	......	......	12,500	15,100	1,380	2,430	1,180	685	354	469	......
16......	......	......	......	12,500	14,100	1,240	2,230	990	732	403	651	......
17......	......	......	......	14,600	11,600	1,240	1,860	830	685	660	830	......
18......	......	......	......	13,500	9,780	1,240	2,140	830	592	880	1,180	......
19......	......	......	......	11,600	7,730	1,110	2,860	880	548	880	1,310	......
20......	......	......	......	12,100	7,350	990	2,430	1,180	511	990	1,110	......
21......	......	......	......	35,800	7,350	1,110	2,040	2,640	483	935	990	......
22......	......	......	......	30,500	6,270	990	1,530	6,270	422	935	830	......
23......	......	......	......	26,800	4,100	990	1,380	3,320	483	935	830	......
24......	......	......	9,350	14,600	3,570	2,040	1,460	3,080	570	732	830	......
25......	......	......	8,120	13,000	3,320	1,530	1,380	2,750	462	644	780	......
26......	......	......	6,270	13,000	2,860	1,240	1,530	2,230	476	585	685	......
27......	......	......	25,300	21,800	2,860	1,240	1,460	2,430	469	490	780	......
28......	......	......	92,700	16,800	3,320	1,110	1,310	1,610	436	483	935	......
29......	......	......	77,200	14,100	2,640	1,110	1,460	1,460	422	455	935	......
30......	......	......	36,500	12,500	1,860	1,380	1,530	1,380	455	436	1,530	......
31......	......	......	36,500	......	2,230	......	1,310	1,610	......	442	......	......
Mean...	2,820	5,860	13,100	20,900	8,220	1,740	1,940	1,530	826	538	686	1,480

NOTE.— Daily discharge determined from a fairly well-defined rating curve.

Monthly Discharge of Delaware River at Port Jervis
[Drainage area, 3,250 square miles]

1914	Discharge in Second-feet				Run-off	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January........	....	....	2,820	0.868	1.00	C
February........	17,400	....	5,860	1.80	1.87	C
March........	92,700	....	13,100	4.03	4.65	C
April........	50,900	11,600	20,900	6.43	7.17	A
May........	17,400	1,860	8,220	2.53	2.92	A
June........	3,320	990	1,740	0.536	0.60	B
July........	4,380	1,240	1,940	0.597	0.69	B
August........	6,270	642	1,530	0.471	0.54	B
September........	1,690	422	826	0.254	0.28	B
October........	990	292	538	0.166	0.19	B
November........	1,530	366	686	0.211	0.24	B
December........	2,640	....	1,480	0.455	0.52	C
The year........	92,700	292	4,951	1.52	20.67	

NOTE.— Mean discharge estimated by comparison with the flow of the east and west branches of the Delaware as follows: January 14 to 31, 3,250 second-feet; February 15 to 28, 4,000 second-feet; March 1 to 23, 5,000 second-feet; December 14 to 31, 1,410 second-feet.

EAST BRANCH OF DELAWARE RIVER AT FISH EDDY

Location.—At the highway bridge near New York, Ontario and Western Railway station at Fish Eddy, 5½ miles above the confluence of the East and West branches of the Delaware river at Hancock.

Records available.— November 19, 1912, to December 31, 1914.

Drainage area.— 790 square miles. (Measured on Post Route map.)

Gage.— Vertical staff, in two sections.

Control.— Coarse gravel; apparently permanent.

Discharge measurements.— At low stages made by wading; at high stages from the highway bridge.

Winter flow.— Discharge relation seriously affected by ice. Frequent discharge measurements are necessary to obtain reliable records for frozen periods.

Accuracy.— Discharge rating curve fairly well defined.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the State Engineer and Surveyor.

Current-meter Discharge Measurements of East Branch of Delaware River at Fish Eddy

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Jan. 5 *a*	C. S. De Golyer	3.01	601
5	C. S. De Golyer	3.02	623
20 *b*	C. S. De Golyer	3.86	399
29 *b*	C. S. De Golyer	4.26	816
Feb. 2	C. S. De Golyer	5.32	2,410
19 *c*	R. S. Barnes	5.51	618
Mar. 20 *c*	R. S. Barnes	6.11	760
April 2	R. S. Barnes	9.40	10,800
21	C. C. Covert	9.70	11,100
22	C. C. Covert	7.91	7,360
Sept. 21 *d*	C. S. De Golyer	1.90	163
Dec. 26 *e*	R. M. Adams	3.82	399

a Measurement made by wading 200 feet below gage.
b Backwater from ice. Measurement made through ice 400 feet below gage.
c Backwater from ice. Measurement made through ice about one-quarter mile below gage.
d Measurement made by wading 300 feet below gage.
e Measurement made by wading one-quarter mile below gage. No good conditions.

Daily Gage Height, in Feet, of East Branch of Delaware River at Fish Eddy

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.10	......	4.70	9.80	......	2.60	2.25	2.15	2.70	1.80	1.80	
2	2.70	5.30	4.60	10.80	......	2.50	2.50	2.05	2.80	1.76	1.70	2.65
3	3.05	5.10	4.60	9.80	......	2.50	2.45	2.05	2.75	1.74	1.72	2.65
4	3.20	4.80	4.50	12.50	......	2.80	2.30	2.00	2.70	1.74	1.76	2.70
5	3.00	4.80	4.50	12.60	......	3.30	2.20	1.95	2.50	1.72	1.77	2.65
6	2.60	4.80	4.50	11.70	......	2.80	2.35	1.95	2.45	1.73	1.76	2.55
7	2.60	4.60	4.60	10.70	......	2.60	2.55	1.90	2.40	1.74	1.74	2.55
8	2.85	4.50	4.60	10.00	......	3.25	2.55	1.90	2.30	1.70	1.75	2.50
9	2.80	4.40	4.60	9.80	......	3.35	2.55	1.90	2.25	1.70	1.78	2.65
10	2.65	3.30	4.50	9.50	5.10	2.90	2.65	1.95	2.20	1.72	1.76	2.80
11	2.60	4.00	4.50	9.20	4.90	2.70	2.55	1.95	2.15	1.69	1.77	2.70
12	2.70	4.50	4.40	9.10	4.80	2.60	3.00	2.60	2.10	1.65	1.78	2.60
13	3.80	5.20	4.40	9.10	4.70	2.45	2.60	2.50	2.05	1.66	1.77	2.60
14	4.00	6.50	4.40	9.00	5.00	2.40	2.40	2.30	2.05	1.64	1.79	2.60
15	4.20	6.20	4.40	8.90	6.20	2.30	2.45	2.15	2.00	1.64	1.84	2.75
16	4.30	5.80	4.30	9.00	5.80	2.35	2.45	2.05	1.95	1.84	2.10	2.75
17	......	5.70	4.80	8.90	5.10	2.30	2.40	2.00	1.95	2.20	2.70	......
18	......	5.70	4.90	8.90	4.40	2.25	2.55	2.05	1.95	2.10	2.50	....
19	......	5.60	5.50	8.90	3.90	2.20	2.50	2.45	1.95	2.25	2.45	3.70
20	3.80	5.50	6.30	10.40	3.80	2.30	2.55	3.25	1.95	2.40	2.60	3.70
21	3.79	5.30	7.10	10.20	3.70	2.30	2.50	4.70	1.90	2.30	2.40	3.70
22	3.60	5.30	6.10	8.70	3.60	2.30	2.50	4.70	1.95	2.15	2.40	3.70
23	3.50	5.20	5.40	7.00	3.50	2.25	2.40	3.70	1.80	2.05	2.30	3.60
24	3.45	5.00	5.40	6.80	3.30	2.35	2.50	3.40	1.85	1.94	2.25	3.70
25	3.40	4.90	5.60	6.60	3.20	2.40	2.50	3.15	1.80	1.87	2.20	3.70
26	3.35	4.90	6.30	......	3.20	2.25	2.35	2.90	1.80	1.87	2.30	3.70
27	3.35	4.80	10.20	......	3.10	2.15	2.25	2.75	1.90	1.82	2.40	3.70
28	3.25	4.80	14.80	......	3.05	2.25	2.30	2.75	1.85	1.80	2.85	3.90
29	4.20	......	13.20	......	3.00	2.30	2.30	2.80	1.80	1.80	2.80	3.70
30	5.20	......	10.00	......	2.95	2.30	2.25	3.00	1.80	1.93	2.60	3.80
31	......	......	8.80	......	2.90	......	2.25	2.80	......	1.90	......	3.80

NOTE.— Discharge relation affected by ice, January 11 to March 26 and December 12 to 31.

Daily Discharge, in Second-feet, of East Branch of Delaware River at Fish Eddy

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	670	2,890	......	11,500	......	412	274	239	456	134	134	434
2	456	2,460	......	14,400	......	370	370	206	504	124	110	434
3	640	2,080	......	11,500	......	370	350	206	480	120	115	456
4	730	1,740	......	19,600	......	504	292	190	456	120	124	434
5	610	1,850	......	20,000	......	800	256	176	370	115	127	391
6	412	1,630	......	17,100	......	504	311	176	350	117	124	391
7	412	1,220	......	14,100	......	412	391	161	330	120	120	370
8	530	1,040	......	12,000	......	765	391	161	292	110	122	434
9	504	870	......	11,500	......	835	391	161	274	110	129	504
10	434	730	......	10,800	2,640	556	434	176	256	115	124	456
11	330	583	......	10,100	2,390	456	391	176	239	108	127	412
12	292	434	......	9,920	2,270	412	610	412	222	99	129	......
13	292	456	......	9,920	2,150	350	412	370	206	101	127	......
14	256	870	......	9,700	2,510	330	330	292	206	97	132	......
15	350	835	......	9,480	4,200	292	350	239	190	97	145	......
16	504	800	......	9,700	3,600	311	350	206	176	145	222	......
17	556	765	......	9,480	2,640	292	330	190	176	256	456	......
18	530	730	......	9,480	1,810	274	391	206	176	222	370	......
19	456	670	434	9,480	1,290	256	370	350	176	274	350	......
20	391	583	870	13,200	1,200	292	391	765	176	330	412	......
21	330	504	1,630	12,600	1,110	292	370	2,150	161	292	330	......
22	311	480	800	9,040	1,030	292	370	2,150	176	239	330	......
23	256	434	391	5,600	950	274	330	1,110	134	206	292	......
24	239	350	370	5,220	800	311	370	870	148	173	274	......
25	222	330	480	4,860	730	330	370	700	134	153	256	......
26	222	330	2,460	......	730	274	311	556	134	153	292	......
27	239	311	12,600	......	670	239	274	480	161	139	330	......
28	239	274	27,900	......	640	274	292	480	148	134	530	......
29	800	......	22,000	......	610	292	292	504	134	134	504	......
30	2,200	......	12,000	......	583	292	274	610	134	170	412	......
31	3,660	......	9,260	......	556	......	274	504	......	161	......	......
Mean	583	937	3,210	10,500	1,830	389	352	489	239	157	242	369

NOTE.— Daily discharge values given during the period, January 11 to March 26, inclusive, are only approximate. Daily discharge for periods of open water determined from a well-defined rating curve. New rating table used, beginning March 27.

Monthly Discharge of East Branch of Delaware River at Fish Eddy

[Drainage area, 790 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January	3,660	222	583	0.738	0.85	B
February	2,890	274	937	1.19	1.24	C
March	27,900	370	3,210	4.06	4.68	D
April	20,000	....	10,500	13.30	14.83	C
May	....	556	1,830	2.32	2.68	B
June	835	239	389	0.492	0.55	B
July	610	256	352	0.446	0.51	B
August	2,150	161	489	0.619	0.72	B
September	504	134	239	0.303	0.34	B
October	330	97	157	0.199	0.23	B
November	530	110	242	0.306	0.34	B
December	504	....	369	0.467	0.54	B
The year	27,900	97	1,600	2.02	27.51	

NOTE.— Mean discharge estimated by comparison with West branch of Delaware at Hale Eddy and Delaware at Port Jervis as follows: March 1 to 18, 462 second-feet; April 26 to May 9, 5,010 second-feet; December 12 to 21, 310 second-feet; December 22 to 30, 362 second-feet.

WEST BRANCH OF DELAWARE RIVER AT HALE EDDY

Location.—At high bridge, 400 feet west of the Erie Railroad station in the village of Hale Eddy, 8 miles above junction with East branch at Hancock, 8 miles below the power dam of the Deposit Electric Co.

Records available.— November 15, 1912, to December 31, 1914.

Drainage area.— 611 square miles. (Measured on Post Route map.)

Gage.— A vertical staff gage in four sections.

Control.— Coarse gravel and boulders, about three-fourths mile below the gage and apparently permanent. Between the control and the gage there is low land behind the left bank, which is overflowed by extreme high water.

Discharge measurements.— Made by wading across three channels above the bridge or one below in low water. High-water measurements made from highway bridge.

Winter flow.— Discharge relation seriously affected by ice. Frequent discharge measurements are necessary to obtain the discharge during this period.

Floods.— The observer states that on October 10, 1893, the water reached an elevation indicated by a spike in a tree near the gage. This spike is at gage height 20.3.

Accuracy.— Discharge rating curve fairly well defined. Good conditions for meter measurements.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the State Engineer and Surveyor.

Current-meter Discharge Measurements of West Branch of Delaware River at Hale Eddy

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Jan. 6 *a*......	C. S. De Golyer....................................	4.85	394
21 *a*......	C. S. De Golyer....................................	4.97	248
30 *b*......	C. S. De Golyer....................................	6.39	1,510
Feb. 2.......	C. S. De Golyer....................................	5.34	2,300
19 *c*......	R. S. Barnes.......................................	4.94	644
Mar. 21 *d*......	R. S. Barnes.......................................	5.30	304
April 1.......	R. S. Barnes.......................................	8.26	5,820
22.......	C. C. Covert.......................................	7.91	5,450
Sept. 22 *e*......	C. S. De Golyer....................................	1.78	99
22 *f*......	C. S. De Golyer....................................	1.78	*102*
Oct. 30 *g*......	C. S. De Golyer....................................	1.63	84
Dec. 26 *h*......	R. M. Adams..	5.20	339

a Backwater from ice. Measurement made through ice about 600 feet above gage.
b Backwater from ice. Measurement made through ice about ⅛ mile below gage.
c Backwater from ice. Measurement made through ice about 500 feet below gage.
d Backwater from ice. Measurement made through ice about 800 feet below gage.
e Measurement made by wading about ¼ mile below gage.
f Measurement made by wading 300 feet below gage.
g Measurement made by wading 500 feet below gage.
h Measurement made from ice one-half mile below gage.

Daily Gage Height, in Feet, of West Branch of Delaware River at Hale Eddy

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	2.55	7.40	4.1	8.0	5.00	2.30	2.10	2.10	2.70	1.65	1.55	2.15
2.....	4.60	5.40	4.4	8.8	4.60	2.50	2.10	1.90	2.60	1.60	1.55	2.25
3.....	4.90	4.70	4.4	7.8	4.30	2.70	2.10	1.80	2.95	1.60	1.50	2.25
4.....	4.80	4.80	4.4	6.5	4.10	2.70	2.10	1.80	2.95	1.55	1.60	2.15
5.....	4.00	4.80	4.6	6.1	4.90	2.70	2.00	1.80	2.65	1.50	1.40	2.10
6.....	4.60	3.40	4.6	5.6	6.30	2.55	2.20	1.60	2.50	1.50	1.45	1.95
7.....	4.20	3.80	4.6	5.4	5.30	2.65	2.50	1.60	2.50	1.50	1.50	2.00
8.....	3.60	3.40	4.4	7.8	4.80	2.60	2.70	1.70	2.30	1.55	1.50	2.00
9.....	3.60	2.65	4.4	11.2	4.60	3.20	2.85	2.00	2.30	1.45	1.50	1.95
10.....	3.40	2.60	4.2	8.2	4.40	2.80	3.60	2.10	2.10	1.55	1.75	2.00
11.....	5.00	2.80	4.2	6.9	4.00	2.70	3.70	2.00	2.10	1.50	1.65	2.00
12.....	5.30	2.35	3.8	6.6	4.70	2.35	3.60	1.90	2.05	1.50	1.65	1.90
13.....	5.10	2.60	3.8	6.0	7.10	2.20	3.20	1.80	2.00	1.45	1.65	1.70
14.....	5.20	3.60	3.7	5.4	6.20	2.05	3.00	1.80	1.95	1.45	1.50	2.05
15.....	5.00	4.20	3.4	5.2	5.60	2.00	2.90	1.80	1.90	1.50	1.70	1.85
16.....	5.20	4.80	3.7	5.7	5.40	2.15	2.70	1.80	1.85	1.55	1.95	2.25
17.....	5.00	4.80	5.0	5.6	4.70	2.00	2.55	1.80	1.90	1.95	2.10	2.60
18.....	5.00	4.80	6.6	5.3	4.30	1.90	2.70	1.90	1.75	1.85	1.95	2.80
19.....	4.90	5.00	6.4	5.2	4.00	1.80	3.10	3.40	1.90	1.90	2.00	3.00
20.....	4.80	5.00	5.6	8.7	3.80	2.00	2.70	3.20	1.80	1.90	2.00	3.30
21.....	4.90	4.80	5.4	9.8	3.60	2.00	2.50	4.10	1.80	2.00	1.90	4.00
22.....	4.60	4.80	5.2	7.8	3.40	2.10	2.50	4.90	1.80	1.90	2.00	3.90
23.....	4.60	4.70	4.9	6.4	3.20	1.95	2.60	4.00	1.75	1.80	2.40	4.60
24.....	4.70	4.60	4.6	5.6	3.00	1.95	2.80	3.50	1.70	1.70	2.35	4.80
25.....	4.80	4.50	4.4	5.2	2.90	2.00	2.70	3.40	1.80	1.70	2.55	5.20
26.....	5.00	4.30	7.4	5.6	2.70	1.80	2.50	3.10	1.65	1.70	2.50	5.20
27.....	4.90	4.20	11.4	5.9	2.75	1.80	2.30	2.75	1.80	1.80	2.55	5.40
28.....	5.00	4.20	14.2	5.6	2.70	1.95	2.20	2.65	1.70	1.65	2.65	5.30
29.....	5.40	......	11.5	5.1	2.55	2.20	2.10	2.70	1.70	1.75	2.60	5.00
30.....	6.50	......	9.4	5.4	2.45	2.20	2.10	3.00	1.70	1.55	2.30	4.40
31.....	6.10	......	8.4	......	2.30	......	2.10	2.85	......	1.50	......	4.40

NOTE.— Discharge relation affected by ice, January 2 to March 25, November 22 to 29 and December 14 to 31, inclusive.

Daily Discharge, in Second-feet, of West Branch of Delaware River at Hale Eddy

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	395	4,550	......	5,520	2,060	280	200	200	470	88	76	220
2	260	2,330	......	6,770	1,740	370	200	138	420	81	76	260
3	420	1,740	......	5,230	1,500	470	200	115	610	81	70	260
4	348	1,900	......	3,560	1,350	470	200	115	610	76	81	220
5	302	1,900	......	3,120	1,980	470	165	115	445	70	61	200
6	260	880	......	2,610	3,340	395	240	81	370	70	66	152
7	240	1,140	......	2,420	2,330	445	370	81	370	70	70	182
8	240	880	......	5,230	1,900	420	470	96	280	76	70	165
9	220	420	......	11,900	1,740	760	552	165	280	66	70	152
10	220	395	......	5,820	1,580	525	1,000	200	200	76	106	165
11	280	280	......	4,040	1,280	470	1,070	165	200	70	88	165
12	395	126	......	3,680	1,820	302	1,000	138	182	70	88	138
13	302	70	......	3,010	4,290	240	760	115	165	66	88	96
14	325	96	......	2,420	3,230	182	640	115	152	66	70	......
15	260	280	......	2,240	2,610	165	580	115	138	70	96	......
16	348	525	......	2,710	2,420	220	470	115	126	76	152	......
17	260	580	......	2,610	1,820	165	395	115	138	152	200	......
18	260	552	2,610	2,330	1,500	138	470	138	106	126	153	......
19	220	640	1,580	2,240	1,280	115	700	880	138	138	165	......
20	182	640	470	6,610	1,140	165	470	760	115	138	165	......
21	220	580	325	8,630	1,000	165	370	1,350	115	165	138	......
22	138	525	260	5,230	880	200	370	1,980	115	138	......	......
23	115	498	200	3,450	760	152	420	1,280	106	115	......	......
24	152	470	182	2,610	640	152	525	940	96	96	......	......
25	165	395	220	2,240	580	165	470	880	115	96	......	......
26	240	......	4,680	2,610	470	115	370	700	88	96	......	......
27	325	......	12,400	2,910	498	115	280	498	115	115	......	......
28	552	......	21,000	2,610	470	152	240	445	96	88	......	......
29	760	......	12,700	2,150	395	240	200	470	96	106	......	......
30	1,580	......	7,830	2,420	348	240	200	640	96	76	......	......
31	3,120	......	6,130	......	280	......	200	552	......	70	......	......
Mean	423	849	2,650	3,960	1,520	282	445	442	218	93	126	194

NOTE.— Daily discharge given during the frozen period, January 2 to March 25, inclusive, is only approximate. Daily discharge for open water periods determined from a well-defined rating curve.

Monthly Discharge of West Branch of Delaware River at Hale Eddy
[Drainage area, 611 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January	3,120	115	423	0.692	0.80	B
February	4,550	70	849	1.39	1.45	B
March	21,000	182	2,650	4.34	5.00	B
April	11,900	2,150	3,960	6.48	7.23	A
May	4,290	280	1,520	2.49	2.87	A
June	760	115	282	0.462	0.52	B
July	1,070	165	445	0.728	0.84	B
August	1,980	81	442	0.723	0.83	B
September	610	88	218	0.337	0.40	B
October	165	66	93	0.152	0.18	B
November	....	61	126	0.207	0.23	B
December	....	....	194	0.318	0.37	C
The year	21,000	61	932	1.52	20.72	.....

NOTE.— Mean discharge estimated as follows: February 26 to March 17, 648 second-feet November 22 to 29, 170 second-feet; December 14 to 22, 107 second-feet; December 23 to 31 298 second-feet.

NEVERSINK RIVER

NEVERSINK RIVER AT GODEFFROY

This station, located at the suspension highway bridge about one-half mile east of the town of Godeffroy and eight miles above the mouth of the river and maintained by U. S. Geological Survey in coöperation with the State Engineer's Department, has been abandoned, as it was found that satisfactory results could not be obtained without an automatic gage, for which funds were not available.

BEAVER KILL AT COOKS FALLS

Location.— At the covered highway bridge in Cooks Falls, N. Y.

Records available.— July 25, 1913, to December 31, 1914.

Drainage area.— Not measured.

Gage.— Vertical staff in two sections, graduated from 0.0 to 16.0.

Control.— Coarse gravel and boulders with left bank of solid rock; probably permanent.

Discharge measurements.— Made from highway bridge during high water and by wading during low water.

Winter flow.— Discharge relation affected by ice.

Coöperation.— Established and maintained by United States Geological Survey in coöperation with the New York State Engineer and Surveyor.

Current-meter Discharge Measurements of Beaver Kill at Cooks Falls

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
April 2	R. S. Barnes	7.30	3,930
Sept. 21 *a*	C. S. De Golyer	1.00	62

a Measurement made by wading 200 feet below gage.

Daily Gage Height, in Feet, of Beaver Kill at Cooks Falls

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	1.60	......	......	5.85	3.80	1.58	1.45	1.28	1.72	0.95	0.92	1.65
2.....	1.75	......	......	7.35	3.45	1.48	1.85	1.18	1.60	0.90	0.95	1.72
3.....	1.95	......	......	6.00	3.28	1.45	1.70	1.12	1.68	0.90	0.90	1.68
4.....	2.05	......	......	5.05	3.12	2.05	1.38	1.12	1.65	0.90	0.90	1.65
5.....	......	......	......	4.55	4.15	2.20	1.28	1.00	1.58	0.90	0.90	1.60
6.....	......	......	......	4.15	4.80	1.92	1.60	1.02	1.42	0.90	0.90	1.55
7.....	......	......	......	4.15	3.95	1.75	1.70	1.02	1.38	0.85	0.90	1.50
8.....	......	......	......	7.65	3.58	2.40	1.70	1.02	1.32	0.84	0.90	1.45
9.....	......	......	......	8.45	3.45	2.25	1.82	0.92	1.28	0.81	1.00	1.85
10.....	......	......	......	6.05	3.25	1.92	1.78	1.50	1.18	0.80	0.98	1.90
11.....	......	......	......	5.45	3.12	1.75	1.72	2.40	1.15	0.80	0.90	1.72
12.....	......	......	......	5.80	3.60	1.55	2.00	1.72	1.05	0.80	0.88	1.62
13.....	......	......	......	5.40	4.45	1.52	1.72	1.48	1.00	0.80	0.85	1.60
14.....	......	......	......	4.85	3.70	1.42	1.50	1.40	0.98	0.80	0.85	1.45
15.....	......	......	......	4.85	3.35	1.32	1.60	1.42	0.95	0.80	0.98	1.42
16.....	......	......	......	5.05	3.15	1.82	1.55	1.22	0.90	1.42	2.15	......
17.....	......	......	......	5.10	3.05	1.30	1.48	1.42	0.92	1.40	2.22	......
18.....	......	......	......	4.95	2.95	1.25	2.60	1.45	0.92	1.35	2.60	......
19.....	......	......	......	5.30	2.78	1.32	1.90	2.65	0.82	1.55	2.45	......
20.....	......	......	......	8.05	2.50	1.50	1.68	2.48	0.95	1.60	1.82	......
21.....	......	......	......	6.85	2.32	1.32	1.50	4.20	0.90	1.35	1.55	......
22.....	......	......	......	5.40	2.25	1.52	1.55	3.50	0.90	1.18	1.42	......
23.....	......	......	......	4.75	2.22	1.42	1.42	2.70	0.95	1.25	1.32	......
24.....	......	......	......	4.25	2.18	1.75	1.55	2.38	1.10	1.00	1.20	......
25.....	......	......	3.45	4.10	2.12	1.55	1.52	2.22	1.00	1.00	1.35	......
26.....	......	......	4.70	5.60	2.00	1.38	1.38	1.98	0.98	0.95	1.35	......
27.....	......	......	7.25	4.80	2.08	1.32	1.40	1.88	1.00	0.95	1.60	......
28.....	......	......	10.40	4.30	2.05	1.45	1.42	1.80	0.95	0.90	1.70	......
29.....	......	......	8.00	4.10	1.92	1.50	1.38	1.80	0.95	0.90	1.62	......
30.....	......	......	6.65	4.15	1.82	1.42	1.40	2.02	1.00	0.92	1.58	......
31.....	......	......	6.20	......	1.68	......	1.38	1.82	......	0.95	......	......

NOTE.— Discharge relation affected by ice from about January 1 to March 24 and December 16 to 31, inclusive.

Discharge not available as rating curve is not yet completely established.

SUSQUEHANNA RIVER DRAINAGE BASIN

DESCRIPTION

Susquehanna river rises in Otsego lake, in northern Otsego county, at an elevation of 1,193 feet above tide, and flows in a general southerly direction into Chesapeake bay. Its course is in many places extremely tortuous, crossing the state boundary between New York and Pennsylvania three times. The entire length of the river is about 500 miles and it drains an area of 27,400 square miles, of which 21,060 square miles lie in Pennsylvania, 6,080 in New York and 260 in Maryland.

Three important streams contribute to the flow in New York state — Unadilla, Chenango and Chemung rivers. These streams all enter from the north. Unadilla, the smallest, joins the main stream near Sidney, Chenango at Binghamton and Chemung at a point in Pennsylvania about 8 miles below the state line.

The topography of the basin varies widely in character. In New York the stream and its tributaries flow through a rolling and, in places, rather broken country, bounded on the north by a mountainous area. In this part of its course its bed is of gravel or sand, with rock ledges here and there, and its banks are moderately high and not extensively subject to overflow. In Pennsylvania the river enters a mountain region, its banks are high and it winds and twists among the parallel ranges in a bed composed generally of drift materials, gravels, sand and boulders. In the lower part of its course, from Marietta to Havre de Grace, it occupies a broad, deep valley, ranging in width from a few hundred feet to more than a mile, and is for the most part bounded on either shore by rocky bluffs and table-lands elevated from 100 to 500 feet above its waters.

SUSQUEHANNA RIVER

SUSQUEHANNA RIVER AT CONKLIN

Location.—At the highway bridge just below Conklin, N. Y., 8 miles above the mouth of the Chenango river at Binghamton, N. Y., and 5 miles below the mouth of Big Snake creek.

Records available.— November 13, 1912, to December 31, 1914.

Drainage area.— 2,350 square miles.

Gage.— Staff gage, with a vertical section bolted to the left abutment of the bridge and below this an inclined section flush with the bed of the stream. During September, 1914, an automatic recording gage was installed. It is located in a 5 by 6-foot wooden house over a 2½ by 6-foot float well. The well is connected with the river by a 4-inch pipe.

Control.— Coarse gravel and boulders.

Discharge measurements.— Made from the bridge at high and medium stages and by wading at low stages.

Winter flow.— Discharge relation affected by ice during extreme cold weather. Frequent discharge measurements are necessary to determine the flow during this period.

Accuracy.— Discharge rating curve well defined. Conditions for meter measurements are good.

Coöperation.— Station established and maintained by United States Geological Survey in coöperation with the State Engineer and Surveyor.

Current-meter Discharge Measurements of Susquehanna River at Conklin

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Jan. 8 *a*	C. S. De Golyer	3.13	1,130
23 *b*	C. S. De Golyer	3.46	917
Feb. 1	C. S. De Golyer	8.40	10,700
21 *b*	R. S. Barnes	5.20	885
Mar. 10 *c*	C. C. Covert	6.36	1,200
25 *d*	R. S. Barnes	5.31	1,090
30	R. S. Barnes	16.42	41,000
April 4	R. S. Barnes	11.92	21,900
June 11	C. S. De Golyer	3.93	1,820
Sept. 18 *e*	C. S. De Golyer	2.67	630
23 *e*	H. W. Fear	2.43	488
Oct. 3 *f*	E. D. Burchard	2.35	522.85
Nov. 2 *g*	C. S. De Golyer	2.21	368
Dec. 23 *h*	R. M. Adams	2.94	654

a Measurement made under partial ice cover.
b Measurement made under complete ice cover.
c Measurement made under complete ice cover about 800 feet below gage.
d Measurement made under complete ice cover 300 feet below gage.
e Measurement made by wading 1,000 feet above gage.
f Measurement made by wading 500 feet above gage; excellent station.
g Measurement made by wading 1,000 feet above gage.
h Measurement made by wading 50 feet above gage.

Daily Gage Height, in Feet, of Susquehanna River at Conklin

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.60	8.30	4.60	13.20	7.70	3.35	3.50	2.80	4.70	2.53	2.20	3.00
2	3.45	7.70	4.60	12.60	7.50	3.30	3.25	2.80	4.10	2.56	2.23	3.00
3	3.25	6.30	4.40	13.00	6.40	3.25	3.25	2.80	4.50	2.35	2.27	3.15
4	3.30	6.10	4.50	11.70	6.00	3.20	2.65	2.75	4.90	2.32	2.22	3.26
5	3.35	5.90	4.50	9.40	5.90	3.45	2.60	2.75	4.30	2.32	2.23	3.18
6	3.35	5.70	4.50	8.30	8.80	3.50	3.10	2.75	3.90	2.27	2.18	3.09
7	3.15	5.20	4.50	7.80	7.80	3.45	3.25	2.70	3.70	2.25	2.19	3.04
8	3.15	4.60	4.50	9.60	6.70	4.10	3.20	2.75	3.60	2.25	2.14	2.94
9	3.05	4.00	4.40	13.60	6.30	4.50	3.50	2.60	3.35	2.23	2.18	2.96
10	3.20	4.00	4.30	13.60	6.10	4.60	4.50	2.60	3.30	2.22	2.21	2.99
11	3.20	4.00	4.20	10.50	5.70	4.00	4.80	2.55	3.20	2.17	2.20	2.98
12	3.25	4.40	4.20	9.40	6.40	3.60	5.20	2.70	3.10	2.18	2.22	2.97
13	3.90	5.20	4.10	8.80	9.00	3.90	5.40	4.00	3.05	2.19	2.23	2.83
14	3.90	5.30	4.10	8.10	9.30	3.20	4.90	3.60	2.90	2.15	2.23	3.02
15	3.80	5.40	4.10	7.60	7.70	3.10	4.60	3.20	2.80	2.13	2.23	2.79
16	3.80	5.50	4.20	8.40	6.50	3.00	4.20	3.05	2.75	2.21	2.37	2.77
17	3.80	5.60	4.70	8.60	6.10	2.95	3.80	3.00	2.70	2.25	2.53	3.06
18	3.60	5.50	5.80	8.20	5.70	2.95	6.10	2.90	2.65	2.19	2.82	3.13
19	3.60	5.50	7.30	7.80	5.30	2.90	6.30	3.20	2.60	2.38	2.92	3.21
20	3.50	5.40	7.20	10.80	5.30	2.90	4.10	5.30	2.55	2.40	2.80	3.04
21	3.60	5.30	6.30	13.10	4.80	2.90	3.80	5.80	2.55	2.58	2.71	3.05
22	3.50	5.20	6.00	12.60	4.50	2.95	3.60	6.80	2.46	2.68	2.57	3.02
23	3.45	5.10	5.80	10.30	4.40	2.95	3.50	5.70	2.42	2.53	2.62	3.14
24	3.40	5.00	5.50	8.40	4.30	2.95	3.45	4.70	2.55	2.37	2.55	3.29
25	3.70	4.90	5.30	7.50	4.10	3.00	3.70	4.50	2.60	2.35	2.56	3.16
26	3.80	4.70	7.60	7.50	3.90	3.00	3.60	4.10	2.75	2.35	2.60	3.35
27	3.80	4.70	11.80	9.00	4.00	2.95	3.40	3.80	2.70	2.32	2.67	......
28	4.00	4.60	17.00	8.20	3.90	2.90	3.25	3.60	2.65	2.26	2.98	......
29	4.40	......	17.40	7.50	3.90	3.40	3.15	3.45	2.50	2.22	3.28	3.22
30	5.40	......	17.30	7.70	3.50	3.30	3.25	3.80	2.50	2.27	3.18	3.14
31	7.10	......	14.60	......	3.45	......	3.00	4.60	......	2.23	......	3.27

NOTE.— Discharge relation affected by ice, January 13 to March 26 and December 16 to 31, inclusive.

Daily Discharge, in Second-feet, of Susquehanna River at Conklin

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1,500	10,500	......	27,200	9,500	1,200	1,350	740	2,990	551	360	890
2	1,350	9,000	......	24,800	9,000	1,150	1,100	740	2,070	572	375	890
3	1,170	5,720	......	26,400	6,400	1,100	1,100	740	2,670	440	395	1,020
4	1,210	5,280	......	21,500	5,500	1,060	635	705	3,330	422	370	1,110
5	1,260	4,840	......	14,000	5,280	1,300	600	705	2,360	422	375	1,040
6	1,260	4,430	......	11,000	12,300	1,350	970	705	1,810	395	350	962
7	1,080	3,500	......	9,740	9,740	1,300	1,100	670	1,570	385	355	922
8	1,080	2,540	1,350	14,600	7,100	2,070	1,060	705	1,460	385	330	842
9	991	1,600	1,260	28,900	6,170	2,670	1,350	600	1,200	375	350	858
10	1,120	1,170	1,170	28,900	5,720	2,830	2,670	600	1,150	370	365	882
11	1,120	866	1,120	17,400	4,840	1,940	3,160	565	1,060	345	360	874
12	1,170	805	1,080	14,000	6,400	1,460	3,860	670	970	350	370	866
13	......	1,170	991	12,300	12,800	1,810	4,230	1,940	930	355	375	761
14	......	1,170	948	10,500	13,700	1,060	3,330	1,460	810	335	375	906
15	......	1,210	948	9,240	9,500	970	2,830	1,060	740	325	375	733
16	......	1,210	1,080	11,300	6,630	890	2,210	930	705	365	452	......
17	......	1,210	1,600	11,800	5,720	850	1,690	890	670	385	551	......
18	......	1,170	3,000	10,800	4,840	850	5,720	810	635	355	754	......
19	......	1,120	6,170	9,740	4,040	810	6,170	1,060	600	458	826	......
20	948	1,030	4,840	18,400	4,040	810	2,070	4,040	565	470	740	......
21	991	948	2,840	26,800	3,160	810	1,690	5,060	565	586	677	......
22	948	866	1,970	24,800	2,670	850	1,460	7,330	506	656	579	......
23	907	754	1,600	16,800	2,510	850	1,350	4,840	482	551	614	......
24	790	685	1,260	11,300	2,360	850	1,300	2,990	565	452	565	......
25	1,120	652	1,080	9,000	2,070	890	1,570	2,670	600	440	572	......
26	1,210	......	6,630	9,000	1,810	890	1,460	2,070	705	440	600	......
27	1,210	......	21,800	12,800	1,940	850	1,250	1,690	670	422	649	......
28	1,450	......	44,700	10,800	1,810	810	1,100	1,460	635	390	874	......
29	1,970	......	46,700	9,000	1,810	1,250	1,020	1,300	530	370	1,130	......
30	3,680	......	46,200	9,500	1,350	1,150	1,100	1,690	530	395	1,040	......
31	7,560	......	33,200	......	1,300	......	890	2,830	......	375	......	......
Mean	1,450	2,370	7,830	15,700	5,550	1,220	1,980	1,750	1,140	424	537	825

NOTE.— Daily discharge values given during the frozen period, January 13 to March 26, are only approximate. Daily discharge determined from a rating curve that is very well defined. New rating curve used, beginning April 1, 1914.

Monthly Discharge of Susquehanna River at Conklin

[Drainage area, 2,350 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January	7,560	790	1,450	0.617	0.71	B
February	10,500	652	2,370	1.01	1.05	B
March	46,700	948	7,830	3.33	3.84	B
April	28,900	9,000	15,700	6.68	7.45	A
May	13,700	1,300	5,550	2.36	2.72	A
June	2,830	810	1,220	0.519	0.58	A
July	6,170	600	1,980	1.843	0.97	A
August	7,330	565	1,750	0.745	0.86	A
September	3,330	482	1,140	0.485	0.54	A
October	656	325	424	0.180	0.21	A
November	1,130	330	537	0.229	0.26	A
December	1,110	....	825	0.351	0.40	C
The year	46,700	325	3,393	1.44	19.59	

NOTE.— Mean discharge estimated as follows: January 13 to 19, 1,180 second-feet; February 26 to March 7, 1,210 second-feet; December 16 to 31, 751 second-feet.

CHENANGO RIVER

CHENANGO RIVER NEAR CHENANGO FORKS

Location.— Two miles by road below Chenango Forks post-office, 1.5 miles below the mouth of Tioughnioga river and 11.5 miles above the mouth of river at Binghamton, N. Y.

Records available.— November 11, 1912, to December 31, 1914.

Drainage area.— 1,420 square miles.

Gage.— Inclined staff gage on the left bank.

During September, 1914, an automatic recording gage was installed. The gage is set over a 2½ by 6-foot float well and is protected by a 5 by 6-foot wooden house. The float well is connected with the river by a 4-inch pipe.

Control.— Small cobble filled in with sand and gravel; not likely to shift; current uniform across the entire section.

Discharge measurements.— Low-water measurements made by wading near the gage; high-water measurements made from cable and car.

Winter flow.— Discharge relation affected by ice. Good estimates of flow can be made from frequent discharge measurements made during this period.

Diversions.— In estimating the run-off, the area directly tributary to storage reservoirs, from which diversion is made to the Erie canal, has been deducted from the total natural drainage area. At the head of Chenango river there are six reservoirs aggregating 30 square miles and at the head of the Tioughnioga one — De Ruyter — of 18.2 square miles. These areas have been subtracted from the total area of 1,468 square miles. This gives a net drainage area of 1,420 square miles.

Accuracy.— Discharge rating curve well defined. Conditions for making meter measurements good. Small diurnal fluctuation in gage height at extreme low water.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the State Engineer and Surveyor.

Current-meter Discharge Measurements of Chenango River near Chenango Forks

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Jan. 7	C. S. De Golyer	3.34	842
7	C. S. De Golyer	3.40	915
22 *a*	C. S. De Golyer	3.98	788
24 *a*	C. S. De Golyer	3.94	750
31	C. S. De Golyer	6.43	6,100
Feb. 20 *a*	R. S. Barnes	5.50	814
Mar. 9 *b*	C. C. Covert	4.60	830
Mar. 20 *b*	C. S. De Golyer	5.61	2,080
23 *b*	R. S. Barnes	5.24	1,880
29	R. S. Barnes	12.90	31,500
29	R. S. Barnes	12.50	29,400
April 3	R. S. Barnes	9.58	17,200
4	R. S. Barnes	7.60	10,300
July 26 *c*	C. S. De Golyer	3.55	1,090
Nov. 3 *d*	C. S. De Golyer	2.59	253
3 *e*	C. S. De Golyer	2.63	270
Dec. 25 *f*	R. M. Adams	3.35	563

a Backwater from ice. Measurement made through ice 500 feet above gage.
b Backwater from ice. Measurement made through ice opposite gage.
c Measurement made by wading 300 feet below gage.
d Measurement made by wading 400 feet above gage.
e Measurement made by wading 500 feet above gage.
f Measurement made through ice 600 feet below gage.

Daily Gage Height, in Feet, of Chenango River near Chenango Forks

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.60	8.0	4.40	9.9	5.40	3.30	3.50	2.75	4.20	2.75	2.64	3.19
2	3.40	6.7	4.35	10.2	5.00	3.60	3.25	2.72	4.00	2.71	2.65	3.35
3	3.40	5.9	4.35	9.6	4.60	3.50	3.00	2.65	5.00	2.67	2.64	3.53
4	3.40	6.0	4.35	7.9	4.45	3.40	3.20	2.80	4.90	2.65	2.64	3.42
5	3.40	5.7	4.40	7.0	4.70	3.20	2.95	2.82	4.15	2.65	2.61	3.30
6	3.40	5.1	4.50	6.4	6.20	3.20	2.90	2.72	3.85	2.63	2.61	3.20
7	3.40	4.7	4.50	6.2	5.10	3.20	2.90	2.70	3.70	2.61	2.60	3.14
8	3.30	4.4	4.60	8.8	4.50	3.70	2.90	2.78	3.60	2.62	2.61	3.14
9	3.30	4.0	4.60	11.1	4.60	3.80	2.95	2.75	3.40	2.64	2.65	3.17
10	3.40	4.5	4.60	9.2	4.35	3.50	3.10	2.70	3.30	2.62	2.66	3.19
11	3.40	5.4	4.45	7.8	4.30	3.40	2.90	2.88	3.25	2.61	2.67	3.17
12	3.45	5.9	4.40	7.6	4.50	3.20	2.90	3.10	3.20	2.61	2.68	3.14
13	3.80	5.4	4.40	7.1	8.20	3.10	2.90	3.00	3.10	2.66	2.69	3.02
14	3.60	5.4	4.40	6.6	6.80	3.00	2.90	2.88	3.05	2.64	2.75	2.94
15	3.40	5.4	4.40	6.5	5.60	2.95	2.90	2.82	3.00	2.61	2.72	3.18
16	3.35	5.4	4.50	7.2	5.10	2.82	2.90	2.80	2.95	2.64	2.90	3.31
17	3.65	5.4	4.80	7.0	4.70	2.90	2.90	2.70	2.91	2.79	3.31	......
18	4.05	5.5	5.60	6.7	4.45	2.90	3.35	2.80	2.86	2.88	3.20	......
19	4.05	5.5	5.80	6.6	4.25	2.90	3.60	2.95	2.85	2.83	2.99	......
20	3.90	5.4	5.50	8.2	4.10	2.90	3.10	3.00	2.82	2.86	3.02	3.22
21	3.60	5.4	5.40	8.6	3.95	2.95	3.00	5.70	2.82	2.86	2.97	3.25
22	4.00	5.2	5.40	7.6	3.80	3.00	2.98	5.40	2.80	2.80	2.93	3.27
23	4.00	5.0	5.20	6.6	3.75	2.92	2.92	4.45	2.82	2.75	2.89	3.30
24	4.00	5.0	5.00	5.9	3.70	2.90	2.98	4.10	2.92	2.73	2.94	3.37
25	4.00	4.9	5.00	5.4	3.60	2.90	3.10	3.80	2.88	2.67	2.97	3.34
26	4.00	4.8	6.40	6.4	3.55	2.85	3.20	3.60	2.90	2.68	2.95	3.32
27	4.00	4.7	11.50	6.8	3.50	2.80	2.95	3.45	2.84	2.66	3.11	3.29
28	4.00	4.6	13.10	6.1	3.50	2.85	2.82	3.30	2.80	2.66	3.53	3.32
29	4.60	......	13.10	5.7	3.40	5.20	2.75	3.70	2.80	2.64	3.35	3.35
30	6.70	......	11.30	5.9	3.40	4.10	2.75	4.70	2.85	2.65	3.22	3.38
31	6.40	......	10.30	......	3.35	......	2.80	4.50	......	2.65	......	3.56

NOTE.— Discharge relation affected by ice, January 6 to March 26, and December 15 to 31, inclusive.

Daily Discharge, in Second-feet, of Chenango River near Chenango Forks

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	1,200	10,600	660	18,600	4,390	850	1,080	381	2,100	381	310	741
2.....	960	6,830	616	19,800	3,550	1,200	800	361	1,780	355	316	905
3.....	960	4,840	616	17,400	2,790	1,080	572	316	3,550	329	310	1,120
4.....	960	5,070	616	11,200	2,520	960	750	416	3,350	316	310	984
5.....	960	4,390	660	8,500	2,970	750	531	431	2,020	316	292	850
6.....	905	3,160	750	6,830	6,310	750	491	361	1,540	304	292	750
7.....	905	2,440	800	6,310	3,750	750	491	348	1,330	292	286	696
8.....	800	1,940	850	14,200	2,610	1,330	491	402	1,200	298	292	696
9.....	800	1,330	830	23,400	2,790	1,470	531	381	960	310	316	723
10.....	850	1,080	800	15,800	2,360	1,080	660	348	850	298	323	741
11.....	905	850	660	10,900	2,270	960	491	476	800	292	329	723
12.....	......	750	616	10,300	2,610	750	491	660	750	292	335	696
13.....	......	660	616	8,800	12,100	660	491	572	660	323	342	590
14.....	......	750	616	7,370	7,930	572	491	476	616	310	381	523
15.....	......	705	616	7,100	4,840	531	491	431	572	292	361	......
16.....	......	750	705	9,100	3,750	431	491	416	531	310	491	......
17.....	......	750	1,020	8,500	2,970	491	491	348	499	409	861	......
18.....	......	800	2,180	7,650	2,520	491	905	416	461	476	750	......
19.....	850	800	2,520	7,370	2,180	491	1,200	531	453	438	563	......
20.....	705	750	1,940	12,100	1,940	491	660	572	431	461	590	......
21.....	438	660	1,780	13,400	1,700	531	572	5,070	431	461	547	......
22.....	788	531	1,780	10,300	1,470	572	555	4,390	416	416	515	......
23.....	800	416	1,780	7,370	1,400	507	507	2,520	431	381	483	......
24.....	800	381	1,940	5,550	1,330	491	555	1,940	507	368	523	......
25.....	800	453	2,180	4,390	1,200	491	660	1,470	476	329	547	......
26.....	800	453	5,800	6,830	1,140	453	750	1,200	491	335	531	......
27.....	800	555	24,200	7,930	1,080	416	531	1,020	446	323	669	......
28.....	800	705	31,000	6,050	1,080	453	431	850	416	323	1,120	......
29.....	1,470	......	33,000	5,070	960	3,960	381	1,330	416	310	905	......
30.....	3,550	......	24,200	5,550	960	1,940	381	2,970	453	316	770	......
31.....	6,830	......	20,200	......	905	......	416	2,610	......	316	......	......
Mean...	1,080	1,910	5,370	10,100	2,920	863	592	1,100	965	345	489	646

NOTE.— Daily discharge values given during the frozen period, January 6 to March 26, are only approximate. Daily discharge for open-water periods determined from a rating curve that is very well defined.

Monthly Discharge of Chenango River near Chenango Forks
[Drainage area, 1,420 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January....................	6,830	....	1,080	0.761	0.88	B
February....................	10,600	416	1,910	1.35	1.41	B
March....................	33,000	616	5,370	3.78	4.36	B
April....................	23,400	4,390	10,100	7.13	7.96	A
May....................	12,100	905	2,920	2.06	2.38	A
June....................	3,960	416	863	0.608	0.68	B
July....................	1,200	381	592	0.417	0.48	B
August....................	5,070	316	1,100	0.775	0.89	A
September....................	3,550	416	965	0.680	0.76	B
October....................	476	292	345	0.243	0.28	A
November....................	1,120	286	489	0.344	0.38	A
December....................	1,120	523	646	0.455	0.52	B
The year....................	33,000	286	2,191	1.54	20.98	.....

NOTE.— Mean discharge estimated as follows: January 12 to 18, 568 second-feet; December 15 to 31, 546 second-feet.

CHEMUNG RIVER

DESCRIPTION

Chemung river is formed at Painted Post, N. Y., by the confluence of Tioga and Cohocton rivers. Cohocton river lies entirely in the state of New York. Tioga river receives, just above its mouth, Canisteo river, a large tributary, which also has its drainage basin in New York to the south of Cohocton. The drainage area of Tioga river, above the Canisteo, is mainly in Pennsylvania. Chemung river flows southeastward through Corning, Elmira and Chemung, crosses the state line and flows for a short distance in Pennsylvania, then returns to New York and crosses again to Pennsylvania near Waverly, finally emptying into the Susquehanna near Athens, Bradford county, Pa. The total length of the river is about 40 miles, of which 30 miles lie in New York; the drainage area, measured at the mouth, is 2,520 square miles.

The topographic features of the basin are, as a rule, bold and broad. The hills rise to a height of several hundred feet on either side, within a short distance of the stream. The upland plateau is to a large extent wooded, has impervious soil, no lake storage and few marsh areas. Tributaries are ramifying and uniformly distributed, though not very numerous, and dry gullies, or flood channels, are common. The main river is sluggish, with low banks and a broad valley or flood plain, which is often overflowed. The concentration of storm waters from the three large streams, which unite just above Corning, makes possible excessive floods. Dikes have been erected in the cities of Elmira and Corning for protection. One of the highest recorded freshets in the stream occurred June 1, 1889. It was preceded by phenomenal rainfall, aggregating several inches in a few hours during the night of May 31. The discharge at this time has been estimated at 67 second-feet per square mile from 2,055 square miles, or 138,000 second-feet.[a]

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[a] Report of Francis Collingwood, C. E., on the protection of the city of Elmira, N. Y., against floods.

CHEMUNG RIVER AT CHEMUNG

Location.—About midway between Chemung, N. Y., and Willawana, Pa., about half a mile upstream from the state line and about 10 miles above the junction with the Susquehanna.

Records available.— September 7, 1903, to December 31, 1914.

Drainage area.— 2,440 square miles. (From U. S. Geological Survey water supply papers.)

Gage.— Tape and weight, read twice daily; located at different points as follows: September 7, 1903, to April 19, 1911, on the suspension bridge; April 20, 1911, to February 18, 1912, temporarily located about 250 feet upstream from the bridge while the bridge was being replaced; February 19 to December 31, 1912, gage on the new two-span steel truss bridge, on the site of the old bridge; datum same for all locations of the gage.

Control.— Composed of sand and gravel; occasionally shifting.

Discharge measurements.— Made from the bridge.

Winter flow.— Discharge relation affected by ice. Gage observations suspended during frozen period.

Regulation.— Largest water power development on the river is at Elmira, N. Y. No dams on the river between Elmira and the mouth of the Chemung.

Accuracy.— Conditions for accurate determination of discharge during the open period only fair.

Coöperation.— Established and maintained by the United States Geological Survey in coöperation with the State Engineer and Surveyor.

Current-meter Discharge Measurements of Chemung River at Chemung

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Mar. 24	R. S. Barnes	4.30	2,560
31	R. S. Barnes	11.40	25,400
Sept. 24 [a]	H. W. Fear	2.01	274
24 [b]	C. S. De Golyer	1.99	252
Nov. 5 [c]	C. S. De Golyer	1.90	200
5 [d]	C. S. De Golyer	1.90	209

[a] Measurement made by wading 500 feet below gage.

[b] Measurement made by wading 600 feet below gage.

[c] Measurement made by wading 1,000 feet below gage.

[d] Measurement made by wading 700 feet below gage.

Daily Gage Height, in Feet, of Chemung River at Chemung

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	......	11.00	......	9.10	4.70	3.25	2.35	1.96	2.85	1.96	1.90	2.23
2.....	......	7.50	......	10.20	4.40	3.10	2.30	1.96	2.75	1.92	1.91	2.23
3.....	......	6.50	......	9.70	4.10	3.00	2.24	1.96	3.90	1.91	1.90	2.32
4.....	4.30	7.00	......	7.80	3.90	2.95	2.20	1.90	4.20	1.91	1.90	2.50
5.....	4.20	7.10	......	6.80	4.20	3.20	2.18	1.93	3.60	1.90	1.89	2.44
6.....	......	5.70	......	6.10	11.40	3.25	2.16	1.92	3.30	1.88	1.86	2.34
7.....	......	5.20	......	5.80	8.90	3.10	2.14	1.87	3.00	1.87	1.86	2.31
8.....	......	4.80	......	10.60	6.80	2.95	2.12	1.89	2.80	1.85	1.88	2.32
9.....	......	3.90	......	11.60	7.50	2.85	2.12	2.39	2.70	1.87	1.93	2.32
10.....	......	3.70	......	8.80	8.30	2.95	2.20	2.46	2.60	1.86	1.91	2.39
11.....	......	3.70	......	7.80	6.70	2.80	2.24	2.21	2.48	1.96	1.96	2.44
12.....	......	......	......	7.20	9.20	2.75	2.46	2.12	2.43	1.92	1.96	2.45
13.....	......	......	......	6.50	15.10	2.65	2.46	2.08	2.36	1.89	1.98	2.29
14.....	......	......	......	5.90	12.30	2.60	2.36	2.09	2.32	1.92	1.98	2.25
15.....	......	......	......	5.60	8.40	2.50	2.32	2.12	2.26	1.92	2.00	......
16.....	......	......	......	8.30	6.90	2.49	2.38	2.02	2.20	1.98	2.20	......
17.....	......	......	8.10	9.00	6.00	2.42	2.80	2.06	2.16	2.02	3.34	......
18.....	......	......	9.20	7.80	5.40	2.36	2.90	2.01	2.12	2.03	3.07	......
19.....	......	......	6.20	6.90	5.00	2.34	2.48	2.80	2.08	2.10	2.75	......
20.....	......	......	5.60	6.60	4.60	2.38	2.24	3.70	2.04	2.10	2.58	......
21.....	......	......	5.00	7.70	4.40	2.38	2.21	5.10	2.05	2.16	2.46	......
22.....	......	......	4.80	6.50	4.10	2.42	2.12	6.00	2.04	2.14	2.38	......
23.....	......	......	4.50	5.90	3.90	2.40	2.09	4.30	1.98	2.04	2.24	......
24.....	......	......	4.30	5.30	3.70	2.38	2.06	3.60	2.00	2.02	2.24	......
25.....	......	......	4.70	4.90	3.60	2.32	2.04	3.50	1.98	1.95	2.24	......
26.....	......	......	10.10	5.40	3.45	2.31	2.04	3.40	2.03	1.98	2.24	......
27.....	......	......	14.30	6.00	3.70	2.29	2.04	3.10	2.02	2.04	2.26	......
28.....	......	......	16.00	5.40	5.10	2.28	2.06	2.90	2.00	1.88	2.20	......
29.....	......	......	15.50	5.00	4.30	2.32	2.06	2.70	1.95	1.89	2.43	......
30.....	11.80	......	11.40	5.00	3.80	2.42	2.04	2.90	1.96	1.91	2.31	......
31.....	10.50	......	11.20	......	3.45	......	2.05	2.95	......	1.90	......	......

NOTE.— Discharge relation affected by ice from about January 21 to 29, February 12 to March 16 and December 15 to 31, inclusive. Measurements made during 1914 indicate a shift in the discharge relation.

Discharge for 1914 not yet available.

ALLEGHENY RIVER DRAINAGE BASIN

DESCRIPTION

Allegheny river drains the western slopes of the Allegheny mountains in Pennsylvania and New York.

The river rises in the central part of Potter county, in northern Pennsylvania, flows in a general northwesterly direction into New York to about the central part of Cattaraugus county, where it turns and flows southwestward back into Pennsylvania; at Franklin, in Venango county, it turns and flows southeastward to the mouth of Mahoning creek, in Armstrong county, where it again bends to the southwest, and at Pittsburgh joins the Monongahela to form the Ohio. The river is about 290 miles long (map measurement) and its drainage area, which is nearly 50 per cent greater than that of the Monongahela, comprises about 11,100 square miles.

The noteworthy tributaries in New York are Oswayo, Olean and Tunugwant creeks. Oswayo and Tunugwant creeks rise in

Pennsylvania. Two other important creeks — Conewango and Brokenstraw — have their sources in New York state, but are tributary to the main stream at points in Pennsylvania.

The elevation of the sources of the river is about 2,500 feet above sea level; at Olean, N. Y., the elevation is 1,420 feet; at Franklin, Pa., the elevation is 960 feet; at Pittsburgh the elevation is 692 feet.

The basin is somewhat regular in shape, being about 2½ times as long as it is wide. Its northwestern boundary is at one point about 8 miles from Lake Erie, lying within about 40 miles of Buffalo. Below Franklin, Pa., the river flows near the western boundary of its basin. The surrounding country is made up of high hills or mountains separated by deep valleys, but west of the main river the country is less mountainous, though the surface is still rolling and hilly.

The bed of the stream is composed chiefly of gravel, ranging in size from small pebbles to cobblestones. The banks are made up of sand, gravel or clay. The area is underlain by shales and except in stream valleys the soil has little depth.

This basin is exceptionally rich in natural resources, coal, oil, gas, limestone, glass sand and building stones occurring in abundance.

This basin was at one time covered with timber, the principal varieties being pine and hemlock. At present, however, only light forests and brush are found at the headwaters of the tributaries, the pine and hemlock having been cut off some time ago.

The mean annual rainfall in this region is about 40 inches and the winters are severe. Snowfall is heavy in the upper part of the basin and lasts for long periods, and ice forms to a thickness of about 2 feet. The heavy ice during the spring floods is very destructive. Jams frequently occur which cause considerable damage from backwater.

Allegheny river is subject to very severe floods, which cause heavy losses to manufacturing and other interests along the river.

The fall of the main river and tributaries is comparatively large and if the stream were in a district where fuels were more expensive, it would undoubtedly be much used for power. When the price of coal advances, so that water power can compete with steam, the water power on this stream will be more extensively developed.

The Cuba reservoir, which feeds the Erie canal through Genesee river, lies on the divide between the Allegheny and Genesee drainage basins. Part of the overflow from this reservoir passes into the Allegheny and the rest into the Genesee.

ALLEGHENY RIVER

ALLEGHENY RIVER AT RED HOUSE

Location.— At highway bridge at Red House, on the road leading from the Pennsylvania Railroad station to the Erie Railroad station; about 5 miles below Salamanca and 13 miles above the state line between New York and Pennsylvania. Conewango creek, the outlet of Chautauqua lake, enters the Allegheny in the state of Pennsylvania.

Records available.— September 4, 1903, to December 31, 1914.

Drainage area.— 1,640 square miles. (From U. S. Geological Survey water supply papers.)

Gage.— Standard chain, attached to the upstream side of bridge near left-hand end; datum unchanged. Read once daily to half tenths.

Channel.— Coarse gravel, occasionally shifting. Current good for medium and high stages; rather slow at low stages.

Discharge measurements.— Made from downstream side of bridge.

Winter flow.— Ice usually affects the relation between gage height and discharge for short periods during the winter months. Gage observations suspended during these periods.

Regulation.— Low-water flow may be slightly affected by the operation of several small power plants above Salamanca. At Olean, N. Y., a wasteway from Cuba reservoir enters the river through Olean creek. This reservoir is on the divide between Oil creek, tributary to Allegheny river, and Genesee river, tributary to Lake Ontario. The stored water is commonly turned into Genesee river through the abandoned summit level of Genesee river canal, but may be diverted into Oil creek through a guard-lock at the head of the canal.

Accuracy.— Records fairly good.

Coöperation.— Station established and maintained by the United States Geological Survey in coöperation with the State Engineer and Surveyor.

Current-meter Discharge Measurements of Allegheny River at Red House

DATE	Made by	Gage height	Discharge
1914		*Feet*	*Sec.-ft.*
Aug. 24........	C. S. De Golyer....................................	3.62	704
24........	C. S. De Golyer....................................	3.65	734

Daily Gage Height, in Feet, of Allegheny River at Red House

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	3.85	......	......	9.80	4.60	3.80	3.25	3.10	3.75	3.05	3.65	4.80
2.....	3.85	......	......	8.40	4.45	3.85	3.30	3.10	3.70	3.00	3.80	5.10
3.....	3.80	......	......	7.60	4.00	3.90	3.35	3.00	3.50	3.05	3.80	5.00
4.....	3.95	......	......	7.20	4.10	3.80	3.30	3.00	3.55	3.00	3.65	4.85
5.....	3.80	......	......	7.70	4.60	4.20	3.30	3.00	3.70	3.00	3.85	4.60
6.....	3.80	......	......	7.50	7.20	3.90	3.20	3.00	3.40	3.10	3.65	4.20
7.....	3.85	......	......	8.20	6.80	3.55	3.25	3.00	3.45	3.00	3.60	4.15
8.....	3.90	5.20	......	8.40	6.60	3.70	3.30	3.00	3.40	3.05	3.80	4.35
9.....	3.95	4.95	......	8.20	6.50	3.75	3.30	3.05	3.30	3.10	3.85	4.20
10.....	4.20	4.25	......	7.80	6.60	3.55	3.30	3.05	3.30	3.05	3.65	4.10
11.....	4.60	4.80	......	7.70	8.50	3.30	3.20	3.00	3.35	3.10	3.60	4.00
12.....	4.75	4.45	......	7.10	8.80	3.40	3.25	3.00	3.25	3.15	3.80	4.10
13.....	......	4.55	......	7.00	10.40	3.50	3.30	3.00	3.10	3.15	3.75	4.20
14.....	......	4.50	3.60	7.30	10.40	3.50	3.30	3.10	3.15	3.30	4.00	......
15.....	......	4.35	3.80	7.40	8.40	3.55	3.30	3.00	3.15	3.35	4.10	......
16.....	......	4.40	4.45	7.20	6.80	3.50	3.25	3.10	3.15	3.25	4.25	......
17.....	......	4.05	5.00	7.20	5.60	3.40	3.30	3.20	3.10	3.20	4.70	......
18.....	......	4.00	7.60	7.00	5.60	3.65	3.30	3.10	3.15	3.25	4.50	......
19.....	......	3.80	6.20	7.00	4.85	3.55	3.25	3.20	3.15	3.35	4.35	......
20.....	......	3.80	5.30	7.00	4.45	3.60	3.25	3.25	3.10	3.30	4.30	......
21.....	......	3.95	5.80	7.20	4.55	3.40	3.20	3.10	3.10	3.20	4.55	......
22.....	......	3.80	5.20	7.20	4.80	3.50	3.25	3.20	3.15	3.40	4.30	......
23.....	......	......	4.90	6.80	4.90	3.60	3.00	3.25	3.15	3.45	4.35	......
24.....	......	......	4.75	6.40	4.50	3.50	3.00	3.55	3.15	3.35	4.40	......
25.....	......	......	4.90	5.00	4.55	3.40	3.15	3.60	3.10	3.30	4.70	......
26.....	......	......	7.60	5.20	4.40	3.40	3.10	3.65	3.05	3.50	4.60	......
27.....	5.50	......	9.20	4.95	4.55	3.45	3.10	3.65	3.00	3.55	5.00	......
28.....	5.60	......	11.70	4.70	4.40	3.30	3.10	3.60	3.05	3.65	5.40	......
29.....	7.00	......	11.40	4.75	4.65	3.30	3.00	3.55	3.00	3.40	4.15	......
30.....	9.00	......	10.60	4.80	4.45	3.30	3.00	3.70	3.00	3.30	4.50	......
31.....	9.00	......	10.40	......	4.40	......	3.15	3.60	......	3.65	......	......

NOTE.—Discharge relation affected by ice from January 7 to 26, inclusive, and from about February 20 to March 13, inclusive, and from about December 12 to 31, inclusive.

Daily Discharge, in Second-feet, of Allegheny River at Red House

1914	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	980	......	......	19,800	2,070	920	370	260	865	230	755	2,420
2	980	......	......	13,200	1,820	980	410	260	810	200	920	3,000
3	920	......	......	10,200	1,170	1,040	455	200	600	230	920	2,800
4	1,100	......	......	8,750	1,300	920	410	200	650	200	755	2,520
5	920	......	......	10,500	2,070	1,440	410	200	810	200	980	2,070
6	920	......	......	9,800	8,750	1,040	330	200	500	260	755	1,440
7	......	......	......	12,400	7,390	650	370	200	550	200	700	1,370
8	......	3,200	......	13,200	6,780	810	410	200	500	230	920	1,660
9	......	2,700	......	12,400	6,480	865	410	230	410	260	980	1,440
10	......	1,520	......	10,800	6,780	650	410	230	410	230	755	1,300
11	......	2,420	......	10,500	13,600	410	330	200	455	260	700	1,170
12	......	1,820	......	8,400	15,000	500	370	200	370	295	920	......
13	......	1,980	......	8,050	22,900	600	410	200	260	295	865	......
14	......	1,900	700	9,100	22,900	600	410	260	295	410	1,170	......
15	......	1,660	920	9,450	13,200	650	410	200	295	455	1,300	......
16	......	1,740	1,820	8,750	7,390	600	370	260	295	370	1,520	......
17	......	1,240	2,800	8,750	4,080	500	410	330	260	330	2,240	......
18	......	1,170	10,200	8,050	4,080	755	410	260	295	370	1,900	......
19	......	920	5,630	8,050	2,520	650	370	330	295	455	1,660	......
20	......	......	3,410	8,050	1,820	700	370	370	260	410	1,590	......
21	......	......	4,570	8,750	1,980	500	330	260	260	330	1,980	......
22	......	......	3,200	8,750	2,420	600	370	330	295	500	1,590	......
23	......	......	2,610	7,390	2,610	700	200	370	295	550	1,660	......
24	......	......	2,330	6,190	1,900	600	200	650	295	455	740	......
25	......	......	2,610	2,800	1,980	500	295	700	260	410	2,240	......
26	......	......	10,200	3,200	1,740	500	260	755	230	600	2,070	......
27	3,850	......	16,800	2,700	1,980	550	260	755	200	650	2,800	......
28	4,080	......	30,000	2,240	1,740	410	260	700	230	755	3,630	......
29	8,050	......	28,400	2,330	2,160	410	200	650	200	500	1,370	......
30	15,900	......	24,000	2,420	1,820	410	200	810	200	410	1,900	......
31	15,900	......	22,900	......	1,740	......	295	700	......	755	......	......
Mean	2,310	2,500	5,940	8,500	5,620	682	346	370	388	381	1,440	1,930

NOTE.— Mean discharge for frozen periods estimated by comparison with records of Genesee river at St. Helena and Chenango near Chenango Forks. Daily discharge for open-water period determined from a fairly well-defined rating curve.

Monthly Discharge of Allegheny River at Red House
[Drainage area, 1,640 square miles]

1914	DISCHARGE IN SECOND-FEET				RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Per square mile	Depth in inches on drainage area	
January	15,900	....	2,310	1.41	1.63	C
February	....	....	2,500	1.52	1.58	C
March	30,000	....	5,940	3.62	4.17	B
April	19,800	2,240	8,500	5.18	5.78	A
May	29,900	1,170	5,620	3.43	3.95	A
June	1,440	410	682	0.416	0.47	B
July	445	200	346	0.211	0.24	B
August	810	200	370	0.226	0.26	B
September	865	200	388	0.237	0.27	B
October	755	200	381	0.232	0.27	B
November	3,630	700	1,440	0.878	0.98	B
December 1-11	....	....	*1,930	*1.18	*0.48	C

NOTE.— Mean discharge estimated as follows: January 7 to 26, inclusive, 900 second-feet; February 1 to 7, inclusive, 6,900 second-feet; February 20 to 28, inclusive, 711 second-feet; March 1 to 13, inclusive, 842 second-feet.

* For 11 days only.

MISCELLANEOUS

DISCHARGE MEASUREMENTS

Miscellaneous Measurements by U. S. Geological Survey

DATE	Stream	Tributary to —	Locality	Gage height	Discharge
1914				*Feet*	*Sec.-ft.*
Sept. 1	West Canada creek	Mohawk river	Kast Bridge, N. Y.	29.44	1,300
20 [a]	Mongaup river	Delaware river	Rio, N. Y.	0.69	34.6
Aug. 24	South branch, Oswegatchie river	Oswegatchie river	Talcville, N. Y.	[b]4.0	77.0

[a] Measurement made by wading 600 feet above gage.

[b] Tail-race gage height; pond gage height was 4.2 feet.

INDEX

Supplement to the Annual Report of the State Engineer and Surveyor of New York, 1914

A PAGE

Acknowledgment for records furnished 7
Albany, Hudson river, gaging station 193–4
Allegheny river drainage basin, description and gaging station at Red House 342–6
Alloway, Canandaigua outlet, gaging station 160–1
Alplaus kill, near Charlton, gaging station 10, 289–91
Altmar, Orwell brook, gaging station 91–3
Astoken, precipitation 206
Astoronga mill, Little Falls, Mohawk river, gaging station 286–7
Auburn, Owasco outlet, gaging station 10, 154–6
Ausable Forks, Ausable river, gaging station 10, 33–5
Ausable river:
  Description 31–2
  Drainage areas 32
  Gaging station at Ausable Forks 10, 33–5

B

Baldwinsville, above dam, Seneca river, gaging station 141
Baldwinsville, below dam, Seneca river, gaging station 141
Battle Island, above dam, Oswego river, gaging station 107
Battle Island, above dam, west side, Oswego river, gaging station 107
Battle Island, opposite, Oswego river, gaging station 106, 118
Beaver kill, Cooks Falls, gaging station 332–3
Beaver river, State dam, gaging station 72
Belgium, Seneca river, gaging station 140
Blackbridge, Sacandaga river, gaging station 254–5
Black creek, precipitation at Gray 321
Black River canal, Boonville, gaging stations 65–6, 67
Black river drainage basin:
  Description 62
  Gaging stations:
    Boonville, Black river 10, 65–6, 68–9
    Boonville, Black River canal 65–6, 67
    Boonville, Forestport feeder 65–6
    Copenhagen, Deer river, Lewis county 69–71

- Black river drainage basin — (*Continued*):
  - Gaging stations — (*Continued*): PAGE
    - Felts Mills, Black river.... 63–4
    - Moose River village, Moose river.... 73–5
    - Old Forge, Middle branch, Moose river.... 10, 76–8
    - State dam, Beaver river.... 72
- Board of Water Supply, New York city, records furnished.... 7, 8
- Bolton Landing, Lake George, gaging station.... 36–42
- Boonville, Black River canal, gaging stations.... 65–6, 67
- Boonville, Black river, gaging station.... 10, 65–6, 68–9
- Boonville, Forestport feeder, gaging station.... 65–6
- Brasher Center, St. Regis river, gaging station.... 44–6
- Brasher Iron Works, Deer river, Franklin county, gaging station.... 47–9
- Brewerton, Oneida river, gaging station.... 125
- Brown Station, precipitation.... 206
- Bureau of Hydraulics, reörganization.... 7–8
- Burlington, Vt., Lake Champlain, gaging station.... 22–6
- Butternut creek, description and gaging station at Jamesville.... 129–31

C

- Canadice Lake:
  - Description.... 167, 176
  - Gaging station at Hemlock.... 176–7
- Canajoharie, Mohawk river, gaging station.... 276
- Canandaigua outlet, description and gaging station at Alloway.... 159–61
- Catskill creek watershed, precipitation records.... 206, 207
- Cattaraugus creek, description and gaging station at Versailles.... 188–90
- Caughdenoy, above dam, Oneida river, gaging station.... 124–5, 126–7
- Caughdenoy, below dam, Oneida river, gaging station.... 122–4
- Cayuga lake, Cayuga gaging station.... 144
- Cayuga lake, Ithaca, gaging station.... 145
- Cayuga, near, Mud lock, Seneca river, gaging station.... 144
- Cazenovia lake, area and storage.... 128
- Cedar river, Indian Lake village, gaging station.... 231–3
- Central Bridge, Schoharie creek, gaging station.... 296
- Charlton, near, Alplaus kill, gaging station.... 10, 289–91
- Chemung river, Chemung, gaging station.... 341–2
- Chenango river, Chenango Forks, gaging station.... 9, 10, 337–9
- Chittenango creek, description and gaging station at Chittenango.... 127–9
- Claryville, precipitation.... 206
- Clyde, Clyde river, gaging station.... 157
- Clyde river:
  - Description.... 156
  - Gaging stations:
    - Clyde.... 157
    - Lyons.... 157
- Cohoes, Mohawk river, gaging station.... 272
- Coldbrook, Esopus creek, gaging station.... 201–2

PAGE
Cold Spring, precipitation.. 208
Conklin, Susquehanna river, gaging station....................9, 10, 334–7
Conservation Commission, coöperation with...................... 7, 8
Conversion table 15–6
Cooks Falls, Beaver kill, gaging station......................... 332–3
Copenhagen, Deer river, Lewis county, gaging station............. 69–71
Corinth, Hudson river, gaging station............................ 216–7
Corinth, precipitation 260
Cornwall, precipitation 208
Crocker's reef dam, Hudson river, gaging station................214, 222–3
Cross lake, Jordan, Seneca river, gaging station................. 142

D

Deerfield reservoir, near Utica, precipitation.................... 320
Deer river, Franklin county, description and gaging station at Brasher Iron Works... 47–9
Deer river, Lewis county, description and gaging station at Copenhagen 69–71
Delaware river drainage basin:
  Description 323
  Gaging stations:
    Cooks Falls, Beaver kill....................................... 332–3
    Fish Eddy, East branch, Delaware river.....................10, 326–8
    Godeffroy, Neversink river..................................... 332
    Hale Eddy, West branch, Delaware river.....................10, 329–31
    Port Jervis, Delaware river.................................... 323–6
    Rio, Mongaup river... 347
Delta dam, Delta reservoir, gaging station....................... 283
Delta reservoir, water-surface elevations........................ 283
Dolgeville, East Canada creek, gaging station.................... 300–2
Drainage areas. (*See* names of streams.)
Dunsbach Ferry, Mohawk river, gaging station..................... 273

E

Eagle Bridge, Hoosic river, gaging station....................... 245–7
East Canada creek:
  Description 300
  Drainage areas 269
  Gaging station at Dolgeville..................................... 300–2
Edgewood, precipitation 206
Eel weir bridge, near Ogdensburg, Oswegatchie river, gaging station. 10, 57–9
Equivalents, table of... 15–6
Erie canal, Pendleton, gaging station............................ 184–5
Erie canal, Tonawanda, gaging station............................ 184
Erie canal, Vischer's Ferry, gaging station...................... 284
Erieville reservoir, area and storage............................. 128

Esopus creek: PAGE
  Description 199-200
  Gaging stations:
    Coldbrook 201-2
    Mount Marion 200-1
  Precipitation records 206, 207
Esperance, Schoharie creek, gaging station 295

F

Fayetteville, Limestone creek, gaging station 134
Fayetteville, Limestone feeder, gaging station 134
Felts Mills, Black river, gaging station 63-4
Fish Eddy, East branch, Delaware river, gaging station 10, 326-8
Flint creek, description and gaging station at Phelps 162-5
Fonda, Fultonville bridge, Mohawk river, gaging station 275
Forestport feeder, Boonville, gaging station 65-6
Fort Edward, Bridge street, Hudson river, gaging station 215
Fort Hunter, Schoharie creek, gaging station 293-4
Fort Miller, above dam, Hudson river, gaging station 214
Fort Miller, below dam, Hudson river, gaging station 213
Fort Montgomery, Rouses Point, Richelieu river, gaging station 21-2
Fort Plain, Mohawk river, gaging station 276
Fox Ridge, N. Y. C. R. R. bridge, Seneca river, gaging station 143
Fox's bridge, near Pulaski, Salmon river, gaging station 89-91
Frankfort, Mohawk river, gaging station 279
Franklinton, precipitation 206
Fulton, above lower dam, Oswego river, gaging station 108-11
Fulton, above Oswego Falls dam, Oswego river, gaging station 111-3
Fulton, mouth of Ox creek, Oswego river, gaging station 114
Fulton, mouth of Waterhouse creek, Oswego river, gaging station 108
Fulton, near, Battle Island, above dam, Oswego river, gaging station 107
Fulton, near, Battle Island, above dam, west side, Oswego river, gaging station 107
Fulton, near, opposite Battle Island, Oswego river, gaging station 106
Fultonville bridge, Fonda, Mohawk river, gaging station 275

G

Gaging stations, accuracy of data 12-3
Gaging stations maintained during winter of 1913-14 10
Ganargua creek:
  Description 158
  Gaging stations:
    Newark, north of 158
    Palmyra 159
Genesee river drainage basin:
  Description 166-8
  Drainage areas 168

Genesee river drainage basin — (*Continued*):
  Gaging stations: PAGE
    Hemlock, Canadice lake outlet.......................... 176–7
    Mt. Morris, near, Jones' bridge, Genesee river............ 172–3
    Rochester, Elmwood avenue, Genesee river..............10, 168–71
    St. Helena, Genesee river..............................10, 173–6
  Water-surface elevations 170
Geneva, above guard-lock, Seneca river, gaging station............ 147
Geneva, below guard-lock, Seneca river, gaging station............ 146
Geological Survey, U. S., coöperation with..................... 7, 8
Glens Falls, above feeder dam, Hudson river, gaging station...... 215
Glens Falls, at Varney farm, Hudson river, gaging station.......... 216
Glens Falls, precipitation 260
Godeffroy, Neversink river, gaging station........................ 332
Graefenburg, near Utica, precipitation............................ 319
Grahamsville, precipitation 206
Grant, near, Twin Rock bridge, precipitation..................... 322
Grant, near, Twin Rock bridge, West Canada creek, gaging station.. 313
Gray, precipitation 321

H

Hadley, Sacanadaga river, gaging station........................10, 249–51
Haines Falls, precipitation... 206
Hale Eddy, West branch, Delaware river, gaging station..........10, 329–31
Hemlock, Canadice lake outlet, gaging station.................... 176–7
Hemlock lake, elevation and areas................................ 167
Herkimer, Mohawk street bridge, Mohawk river, gaging station.... 278
Herkimer, near, Kast Bridge, West Canada creek, gaging station..304–6, 347
Herkimer, Washington street bridge, Mohawk river, gaging station.. 278
High Falls, precipitation.. 206
Highmount, precipitation 206
Hinmansville bridge, Oswego river, gaging station................ 114
Hoffmeister, precipitation 322
Honeoye lake, elevation and areas................................ 167
Hoosick Falls, Hoosic river, gaging station...................... 247
Hoosick Falls, precipitation...................................... 259
Hoosic river:
  Description 242
  Gaging stations:
    Eagle Bridge 245–7
    Hoosick Falls 247
    Johnsonville 244
    Schaghticoke 242–3
  Precipitation, Hoosick Falls............................... 259
Hope, Sacandaga river, gaging station............................ 251–3
Hudson river drainage basin:
  Description 191–3
  (*See also* "Lower Hudson river drainage basin," "Mohawk river drainage basin," *and* "Upper Hudson river drainage basin.")

Hydraulic data: PAGE
- Accuracy 12–3
- Conversion table 15–6
- Terms, defined 14–5

Hydraulics, bureau of, reörganization 7–8

I

Ilion, Mohawk river, gaging station 279
Indian lake reservoir, gate openings at Indian Lake village 9
Indian lake reservoir, Indian Lake village, gaging station 9, 236–41
Indian Lake village, Cedar river, gaging station 231–3
Indian Lake village, Indian lake reservoir, gaging station 9, 236–41
Indian Lake village, Indian river, gaging station 9, 233–5
Indian river, Indian Lake village, gaging station 9, 233–5
Ironton, Brasher Iron Works, Deer river, gaging station 47–9
Ithaca, Cayuga lake, gaging station 145

J

Jack's reef, Memphis, Seneca river, gaging station 142
Jamesville, Butternut creek, gaging station 130–1
Johnsonville, Hoosic river, gaging station 244
Jones' bridge, near Mt. Morris, Genesee river, gaging station 172–3
Jordan, Cross lake, Seneca river, gaging station 142

K

Kast Bridge, near Herkimer, West Canada creek, gaging station 304–6, 347
Kenwood, Oneida creek, gaging station 137–8
Kinderhook creek, description and gaging station at Rossman 203–5
Kingston, precipitation 206

L

Lackawack, precipitation 206
Lackawack, Rondout creek, gaging station 198–9
Lake Champlain drainage basin. (*See* "St. Lawrence river drainage.")
Lake George, gaging stations at Lake George, Sagamore and Rogers Rock 36–43
Lake Hill, precipitation 206
Lake Ontario drainage. (*See* "Black river drainage basin," "Genesee river drainage basin," "Niagara river drainage," "Oswego–Oneida–Seneca river drainage basin," "Salmon river drainage basin," *and* "Sandy creek drainage basin.")
Lake Ontario, Oswego, gaging station 99–102
Lexington, precipitation 206
Liberty Mills, Free bridge, Hudson river, gaging station 212
Limestone creek:
- Description 132
- Gaging stations:
  - Fayetteville 133–4
  - Manlius 135–6

PAGE
Limestone feeder, Fayetteville, gaging station.................... 134
Linden, Little Tonawanda creek, gaging station..................10, 185–7
Little Falls, above State dam, Mohawk river, gaging station........ 277
Little Falls, lower dam, Mohawk river, gaging station............ 286–7
Little Tonawanda creek, Linden, gaging station..................10, 185–7
Liverpool, near Long Branch, Onondaga outlet, gaging station...... 150
Liverpool, near, Mud lock, Seneca river, gaging station............ 140
Long Branch, near, Mud lock, Seneca river, gaging station.......... 140
Long Branch, Onondaga outlet, gaging station.................... 150
Lower Hudson river drainage basin:
  Gaging stations:
    Albany, Hudson river................................ 193–4
    Coldbrook, Esopus creek............................. 201–2
    Lackawack, Rondout creek............................ 198–9
    Mount Marion, Esopus creek.......................... 200–1
    Rosendale, Rondout creek............................ 196–7
    Rossman, Kinderhook creek........................... 203–5
    Troy, below State dam, Hudson river................. 195
  Precipitation records 206–8
  Water-surface elevations 194–5
Lyons, Clyde river, gaging station.............................. 157
Lyons, near, Alloway bridge, Canandaigua outlet, gaging station.. 159–61

M

Manlius, Limestone creek, gaging station........................ 135–6
Massena Springs, Raquette river, gaging station................. 50–3
Mechanicville, above dam of Adirondack E. P. Corp., Hudson river, gaging station 209, 218–9
Mechanicville, below dam of Adirondack E. P. Corp., Hudson river, gaging station 209
Mechanicville, B. & M. R. R. bridge, Hudson river, gaging station.... 210
Mechanicville, precipitation 259
Mechanicville, toll bridge, Hudson river, gaging station............ 210
Mechanicville, West Virginia Pulp and Paper Co.'s mill, Hudson river, gaging station 220–1
Memphis, Jack's reef, Seneca river, gaging station............... 142
Middleburg, Schoharie creek, gaging station...................... 297–8
Minetto, above dam, Oswego river, gaging station................. 106
Minetto, below dam, Oswego river, gaging station................. 105
Mohawk river drainage basin:
  Description 262–3
  Drainage areas 264–71
  Gaging stations:
    Canajoharie, Mohawk river 276
    Central Bridge, Schoharie creek..................... 296
    Charlton, near, Alplaus kill.......................10, 289–91
    Cohoes, Mohawk river................................ 272
    Delta dam, Delta reservoir.......................... 283
    Dolgeville, East Canada creek....................... 300–5
    Dunsbach Ferry, Mohawk river........................ 273

Mohawk river drainage basin — (*Continued*):
  Gaging stations — (*Continued*): PAGE
    Esperance, Schoharie creek.............................. 295
    Fonda, Fultonville bridge, Mohawk river................ 275
    Fort Hunter, Schoharie creek........................... 293–4
    Fort Plain, Mohawk river............................... 276
    Frankfort, Mohawk river................................ 279
    Grant, near, Twin Rock bridge, West Canada creek........ 313
    Herkimer, Mohawk street bridge, Mohawk river.......... 278
    Herkimer, Washington street bridge, Mohawk river........ 278
    Ilion, Mohawk river.................................... 279
    Kast Bridge, near Herkimer, West Canada creek........304–6, 347
    Little Falls, above State dam, Mohawk river.............. 277
    Little Falls, lower dam, Mohawk river.................... 286–7
    Middleburg, Schoharie creek............................ 297–8
    Poland, West Canada creek.............................. 306–8
    Prattsville, Schoharie creek........................... 298–300
    Rexford, Mohawk river.................................. 274
    Ridge Mills, above dam, Mohawk river.................... 282
    Ridge Mills, below dam, Mohawk river.................... 282
    Rome, above State dam, Mohawk river..................... 281
    Rome, below State dam, Mohawk river..................... 280
    Rome, Floyd avenue bridge, Mohawk river..............281, 287–9
    Schenectady, Mohawk river.............................. 274
    Schoharie Junction. (*See* "Central Bridge.")
    Stittville, near, Powell's bridge, Nine-Mile creek.......... 316–8
    St. Johnsville, Mohawk river........................... 277
    Trenton Falls, above Morgan dam, West Canada creek.... 308–9
    Trenton Falls, above Power dam, West Canada creek....... 308–12
    Tribes Hill, Mohawk river.............................. 275, 286
    Utica, Genesee street bridge, Mohawk river............... 280
    Vischer's Ferry, Erie canal............................ 284
    Vischer's Ferry, Mohawk river......................10, 273, 283–6
    Waterford, Mohawk river................................ 272
    Wilmurt, West Canada creek............................. 314–6
  Precipitation records 318–22
  Water-surface elevation records............................ 271–83
Mongaup river, Rio, gaging station............................ 347
Moodna creek, watershed, precipitation records................. 208
Moonkaw Lodge, precipitation 206
Moose river:
  Description 72–3
  Gaging stations:
    Moose River 73–5
    Old Forge, Middle branch.............................. 10, 76–8
Moose River village, Moose river, gaging station................ 73–5
Mosquito Point bridge, Port Byron, Seneca river, gaging station.... 143
Mount Marion, Esopus creek, gaging station...................... 200–1
Mt. Morris, near, Jones' bridge, Genesee river, gaging station....... 172–3
Mud lock, near Cayuga, Seneca river, gaging station............. 144
Mud lock, near Long Branch, Seneca river, gaging station......... 140

N

PAGE

Neversink river, Godeffroy, gaging station........................ 332
Newark, north of, Ganargua creek, gaging station................ 158
New Paltz, precipitation.. 208
Newton Falls, East branch, Oswegatchie river, gaging station...... 60–2
New York City Board of Water Supply, records furnished.......... 7, 8
Niagara river drainage:
  Description 178
  Gaging stations:
    Linden, Little Tonawanda creek..........................10, 185–7
    Pendleton, Erie canal................................. 184–5
    Tonawanda, above State dam, Erie canal................. 184
    Tonawanda, Niagara river.............................. 178–83
    Versailles, Cattaraugus creek.......................... 188–90
  Water-surface elevations 178–85
Nine-Mile creek, Powell's bridge, near Stittville, gaging station...... 316–8
North Creek, Hudson river, gaging station......................10, 228–30
Northumberland, above dam, Hudson river, gaging station.......... 213
Northville, precipitation 261

O

Oak Hill, precipitation.. 206
Oak Orchard, Oneida river, gaging station........................ 122
Ogdensburg, Eel weir bridge, Oswegatchie river, gaging station.... 10, 57–9
Old Forge, Middle branch, Moose river, gaging station............. 10, 76–8
Oneida creek, description and gaging station at Kenwood.......... 137–8
Oneida lake, Sylvan Beach, gaging station........................ 126
Oneida river drainage basin. (*See* "Oswego–Oneida–Seneca river drainage basin.")
Onondaga creek, Syracuse, Temple street, gaging station.......... 152
Onondaga lake, Syracuse, gaging station.......................... 151–2
Onondaga outlet, near Long Branch, gaging station................ 150
Orwell brook, Altmar, gaging station 91–3
Oswegatchie river:
  Description 57
  Gaging stations:
    Eel weir bridge, near Ogdensburg....................... 10, 57–9
    Newton Falls, East branch.............................. 60–2
    Ogdensburg, near 10
    Talcville, South branch................................ 347
Oswego, above curved dam, Oswego river, gaging station............ 104
Oswego, above high dam, Oswego river, gaging station.............. 105
Oswego, below high dam, gaging station........................... 104
Oswego Falls, Fulton, above dam, Oswego river, gaging station...... 111–3
Oswego, Lake Ontario, gaging station............................. 99–102
Oswego–Oneida–Seneca river drainage basin:
  Description 93–4
  Drainage areas 94–7

Oswego–Oneida–Seneca river drainage basin — (*Continued*):

Gaging stations, Oneida river basin: PAGE

Brewerton, Oneida river 125

Caughdenoy, above dam, Oneida river 124–5, 126–7

Caughdenoy, below dam, Oneida river 122–4

Chittenango, Chittenango creek 128–9

Fayetteville, Limestone creek 133–4

Fayetteville, Limestone feeder 134

Jamesville, Butternut creek 130–1

Kenwood, Oneida creek 137–8

Manlius, Limestone creek 135–6

Oak Orchard, Oneida river 122

Sylvan Beach, Oneida lake 126

Three River Point, Oneida river 121

Gaging stations, Oswego river basin:

Battle Island, above dam 107

Battle Island, above dam, west side 107

Battle Island, opposite 106, 118

Fulton, above lower dam 108–11

Fulton, above Oswego Falls dam 111–3

Fulton, mouth of Ox creek 114

Fulton, mouth of Waterhouse creek 108

Hinmansville bridge 114

Minetto, above dam 106

Minetto, below dam 105

Oswego, above curved dam 104

Oswego, above high dam 105

Oswego, below high dam 104

Oswego, Lake Ontario 99–102

Phoenix, above dam 115, 116–8

Phoenix, sixteen hundred feet below dam 115, 116

Gaging stations, Seneca river basin:

Alloway, Canandaigua outlet 160–1

Auburn, Oswasco outlet 10, 154–6

Baldwinsville, above dam, Seneca river 141

Baldwinsville, below dam, Seneca river 141

Belgium, Seneca river 140

Cayuga, Cayuga lake 144

Cayuga, near, Mud lock, Seneca river 144

Clyde, Clyde river 157

Fox Ridge, N. Y. C. R. R. bridge, Seneca river 143

Geneva, above guard-lock, Seneca river 147

Geneva, below guard-lock, Seneca river 146

Ithaca, Cayuga lake 145

Jordan, Cross lake, Seneca river 142

Long Branch, Onondaga outlet 150

Long Branch, Seneca river 140

Lyons, Clyde river 157

Memphis, Jack's reef, Seneca river 142

Mosquito Point bridge, Port Byron, Seneca river 143

- Oswego–Oneida–Seneca river drainage basin — (*Continued*):
  - Gaging stations, Seneca river basin — (*Continued*): PAGE
    - Mud lock, near Cayuga, Seneca river 144
    - Mud lock, near Long Branch, Seneca river 140
    - Newark, north of, Ganargua creek 158
    - Palmyra, Ganargua creek 159
    - Phelps, Flint creek 163–5
    - Seneca Falls, above, Seneca river 146
    - Seneca Falls, below lock No. 6, Seneca river 145, 147–50
    - Syracuse, Onondaga lake 151–2
    - Syracuse, Temple street, Onondaga creek 152
  - Oneida river basin:
    - Description 119–20
    - Drainage areas 94–5
    - Water-surface elevation records 121–6, 129, 133–4
  - Oswego river:
    - Description 98
    - Drainage areas 97
    - Precipitation, South Granby 119
    - Water-surface elevation records 98–118
  - Seneca river basin:
    - Description 139
    - Drainage areas 95–7
    - Water-surface elevation records 139–47, 150–2, 157–60
- Overlook Mt., precipitation 206
- Owasco outlet:
  - Description 153–4
  - Gaging station, near Auburn 10, 154–6
- Ox creek, mouth of, Fulton, Oswego river, gaging station 114

P

- Palmyra, Ganargua creek, gaging station 159
- Peekamoose, precipitation 206
- Peekskill creek watershed, precipitation 208
- Peekskill, precipitation 208
- Pendleton, Erie canal, gaging station 184–5
- Phelps, Flint creek, gaging station 163–5
- Phoenicia, precipitation 206
- Phoenix, above dam, Oswego river, gaging station 115, 116–8
- Phoenix, near, Hinmansville bridge, Oswego river, gaging station 114
- Phoenix, sixteen hundred feet below dam, Oswego river, gaging station 115, 116
- Piercefield, Raquette river, gaging station 10, 53–6
- Plattsburg, Saranac river, gaging station 9, 10, 28–31
- Pleasant Valley, precipitation 208
- Poland, West Canada creek, gaging station 306–8
- Port Byron, Mosquito Point bridge, Seneca river, gaging station 143
- Port Jervis, Delaware river, gaging station 323–6
- Powell's bridge, near Stittville, Nine-Mile creek, gaging station 316–8

PAGE
Prattsville, precipitation 206
Prattsville, Schoharie creek, gaging station........ 298-300
Precipitation records:
  Astoken 206
  Brown Station 206
  Catskill creek watershed 206, 207
  Claryville 206
  Cold Spring 208
  Corinth 260
  Cornwall 208
  Deerfield reservoir, near Utica........ 320
  Edgewood 206
  Esopus creek watershed........ 206, 207
  Franklinton 206
  Glens Falls 260
  Graefenburg, near Utica........ 319
  Grahamsville 206
  Gray 321
  Haines Falls 206
  High Falls 206
  Highmount 206
  Hoffmeister 322
  Hoosick Falls 259
  Kingston 206
  Lackawack 206
  Lake Hill 206
  Lexington 206
  Mechanicville 259
  Moodna creek watershed........ 208
  Moonkaw Lodge 206
  New Paltz 208
  Northville 261
  Oak Hill 206
  Overlook Mt. 206
  Peekamoose 206
  Peekskill 208
  Peekskill creek watershed........ 208
  Phoenicia 206
  Pleasant Valley 208
  Prattsville 206
  Preston Hollow 206
  Roeliff Jansen kill watershed........ 208
  Rondout creek watershed........ 206, 207
  Savage reservoir, near Utica........ 320
  Schoharie creek watershed........ 206, 207
  Silvernails 208
  Slide Mountain 206
  South Granby 119
  Sundown 206

Precipitation records — (*Continued*): PAGE
- Trenton Falls 321
- Tribes Hill 318
- Troy 258
- Twin Rock bridge, near Grant........ 322
- Utica 319
- Utica, near, No. 1 reservoir........ 319
- Walden 208
- Wallkill river watershed........ 208
- Wappinger creek watershed........ 208
- Westerlo 206
- West Hurley 206
- Windham 206

Preston Hollow, precipitation........ 206
Pulaski, Salmon river, gaging station........ 89–91

R

Rain gages. (*See* "Precipitation records.")
Raquette river: ,
- Description 50
- Gaging stations:
  - Massena Springs 50–3
  - Piercefield 10, 53–6

Red House, Allegheny river, gaging station........ 344–6
Rexford, Mohawk river, gaging station........ 274
Richelieu river, Fort Montgomery, Rouses Point, gaging station...... 21–2
Ridge Mills, above dam, Mohawk river, gaging station........ 282
Ridge Mills, below dam, Mohawk river, gaging station........ 282
Rio, Mongaup river, gaging station........ 347
Riverbank, Schroon river, gaging station........10, 256–8
Rochester, Elmwood avenue, Genesee river, gaging station........10, 168–71
Rodman, Sandy creek, gaging station........ 79–83
Roeliff Jansen kill watershed, precipitation records........ 208
Rogers Rock, Lake George, gaging station........ 36–43
Rome, above State dam, Mohawk river, gaging station........ 281
Rome, below State dam, Mohawk river, gaging station........ 280
Rome, Floyd avenue bridge, Mohawk river gaging station........281, 287–8
Rondout creek:
- Description 195–6
- Gaging stations:
  - Lackawack 198–9
  - Rosendale 196–7
- Precipitation records 206, 207

Rosendale, Rondout creek, gaging station........ 196–7
Rossman, Kinderhook creek, gaging station........ 203–5
Rouses Point, Fort Montgomery, Richelieu river, gaging station.... 21–2

S

Sacandaga river: PAGE
  Description 248
  Gaging stations:
    Hadley 10, 249–51
    Hope 251–3
    Wells, Blackbridge 254–5
  Precipitation, Northville 261
Sagamore, Lake George, gaging station 36–42
Salmon river drainage basin:
  Description 89
  Gaging stations:
    Altmar, Orwell brook 91–3
    Pulaski, Salmon river 89–91
Sandy creek drainage basin:
  Description 78
  Gaging stations:
    Rodman, Sandy creek 79–83
    West Rodman, North branch, Sandy creek 83–8
Saranac river:
  Description 28
  Drainage areas 28
  Gaging station at Plattsburg 9, 10, 28–31
Savage reservoir, near Utica, precipitation 320
Savannah, N. Y. C. R. R. bridge, near Fox Ridge, Seneca river, gaging station 143
Schaghticoke, Hoosic river, gaging station 242–3
Schenectady, Mohawk river, gaging station 274
Schoharie creek drainage basin:
  Description 292
  Drainage areas 268
  Gaging stations:
    Central Bridge 296
    Esperance 295
    Fort Hunter 293–4
    Middleburg 297–8
    Prattsville 298–300
    Schoharie Junction. (*See* "Central Bridge.")
  Precipitation records 206, 207
  Water-surface elevations 293, 296
Schoharie Junction, Schoharie creek, gaging station 296
Schroon river, description and gaging station at Riverbank 10, 255–8
Schuylerville, toll bridge, Hudson river, gaging station 212
Seneca Falls, above, Seneca river, gaging station 146
Seneca Falls, below lock No. 6, Seneca river, gaging station 145, 147–50
Seneca lake, Geneva, Seneca river, gaging station 147
Seneca river drainage basin. (*See* "Oswego–Oneida–Seneca river drainage basin.")
Silvernails, precipitation 208
Slide Mountain, precipitation 206

PAGE

- South Granby, precipitation 119
- Spier Falls, Hudson river, gaging station 10, 224–5
- State dam, Beaver river, gaging station 72
- St. Helena, Genesee river, gaging station 10, 173–6
- Stillwater, below dam, Hudson river, gaging station 211
- Stillwater, highway bridge, Hudson river, gaging station 211
- Stittville, near, Powell's bridge, Nine-Mile creek, gaging station 316–8
- St. Johnsville, Mohawk river, gaging station 277
- St. Lawrence river drainage:
  - Description 17–9
  - Drainage areas 18
  - Gaging stations:
    - Brasher Center, St. Regis river 44–6
    - Brasher Iron Works, Deer river 47–9
    - Eel weir bridge, near Ogdensburg, Oswegatchie river 10, 57–9
    - Massena Springs, Raquette river 50–3
    - Newton Falls, East branch, Oswegatchie river 60–2
    - Ogdensburg, near, Oswegatchie river 10, 57–9
    - Piercefield, Raquette river 10, 53–6
  - Gaging stations, Lake Champlain drainage basin:
    - Ausable Forks, Ausable river 10, 33–5
    - Burlington, Vt., Lake Champlain 22–6
    - Fort Montgomery, Rouses Point, Richelieu river 21–2
    - Lake George, Sagamore and Rogers Rock, Lake George 36–43
    - Plattsburg, Saranac river 9, 10, 28–31
    - Whitehall, below dam, Wood creek 27
  - Lake Champlain:
    - Description 19
    - Drainage areas 20
    - Water-surface elevations 27
- Stream gaging. (*See* gaging stations by names.)
- Stream gaging report:
  - Accuracy of data 12–3
  - Arangement and explanation 11–3
  - Scope 8
- Stream gaging stations maintained during winter of 1913–14 10
- St. Regis river, description and gaging station at Brasher Center 44–6
- Sundown, precipitation 206
- Survey, U. S. Geological, coöperation with 7, 8
- Susquehanna river drainage basin:
  - Description 333–4
  - Gaging stations:
    - Chemung, Chemung river 341–2
    - Chenango Forks, Chenango river 9, 337–9
    - Conklin, Susquehanna river 9, 10, 334–7
- Sylvan Beach, Oneida lake, gaging station 126
- Syracuse, Onondaga lake, gaging station 151–2
- Syracuse, Temple street, Onondaga creek, gaging station 152

T

PAGE

Talcville, South branch, Oswegatchie river, gaging station......... 347
Three River Point, Oneida river, gaging station.................. 121
Thurman, Hudson river, gaging station......................... 226-8
Tonawanda, above State dam, Erie canal, gaging station........... 184
Tonawanda creek:
  Description 183
  Gaging stations:
    Linden, Little Tonawanda creek.........................10, 185-7
    Pendleton, Erie canal.................................. 184-5
    Tonawanda, Erie canal.................................. 184
Tonawanda, Niagara river, gaging station....................... 178-83
Trenton Falls, above Morgan dam, West Canada creek, gaging station 308-9
Trenton Falls, above Power dam, West Canada creek, gaging station 308-12
Trenton Falls, precipitation 321
Tribes Hill, Mohawk river, gaging station...................... 275, 286
Tribes Hill, precipitation 318
Troy, above State dam, Hudson river, gaging station............... 208
Troy, below State dam, Hudson river, gaging station............... 195
Troy, precipitation 258
Twin Rock bridge, near Grant, precipitation...................... 322
Twin Rock bridge, near Grant, West Canada creek, gaging station.. 313

U

Upper Hudson river drainage basin:
  Gaging stations:
    Corinth, Hudson river.................................. 216-7
    Crocker's reef dam, Hudson river......................214, 222-3
    Eagle Bridge, Hoosic river............................. 245-7
    Fort Edward, Bridge street, Hudson river................ 215
    Fort Miller, above dam, Hudson river.................... 214
    Fort Miller, below dam, Hudson river.................... 213
    Glens Falls, above feeder dam, Hudson river............. 215
    Glens Falls, at Varney farm, Hudson river............... 216
    Hadley, Sacandaga river...............................10, 249-51
    Hoosick Falls, Hoosic river............................ 247
    Hope, Sacandaga river.................................. 251-3
    Indian Lake village, Cedar river....................... 231-3
    Indian Lake village, Indian lake reservoir..............9, 236-41
    Indian Lake village, Indian river...................... 9, 233-5
    Johnsonville, Hoosic river............................. 244
    Liberty Mills, Free bridge, Hudson river................ 212
    Mechanicville, above dam of Adirondack E. P. Corp., Hudson river 209, 218-9
    Mechanicville, below dam of Adirondack E. P. Corp., Hudson river 209
    Mechanicville, B. & M. R. R. bridge, Hudson river......... 210
    Mechanicville, toll bridge, Hudson river................. 210
    Mechanicville, West Virginia Pulp and Paper Co.'s mill, Hudson river 220-1